OHM Remediation Services Corp.
A Subsidiary of OHM Corporation

June 22, 1999

Mr. Frank Zepka
EFA Chesapeake – Code 18
NAVFACENGCOM – Bldg. 212
901 M Street SE

Re: Work Plan Addendum #3 – Soil Removal Actions, NTC – Bainbridge Delivery Order No. 137

Dear Mr. Zepka:

Enclosed please find one copy of the Work Plan Addendum #3 for the above mentioned site. This addendum includes the operational approach for the removal actions at the Pesticide Shop, Salvage Yard, Ash Pile, and Building 707. This addendum also includes the confirmation sampling/analysis at the Auto Hobby Shop, Health and Safety Plan, Federal Facilities Compliance Agreement (FFCA), and the operational procedures for the residual transite removal.

If you have any questions or need additional information, please call me at (412) 380-4240.

Sincerely,

James Faison/bwp

James Faison
Assistant Project Manager

Cc: Dave Bahuriak – OHM/IT
Mary Cooke USEPA
Dave Leadenham – OHM/IT
Bill Schmidt – OHM/IT
Larry Stearns – OHM/IT

OHM Remediation Services Corp.
A Subsidiary of OHM Corporation

Final
Work Plan Addendum No. 3
Soil Removal Actions
Former Naval Training Center Bainbridge
Port Deposit, Maryland
Delivery Order No. 137

Prepared For:

Department of the Navy
Atlantic Division
Contract No. N62570-93-D-3032
EFA Chesapeake - NAVFACENGCOM
901 M Street, S.E., Building 212
Washington, DC 20374-2121

Prepared By:

OHM Remediation Services Corporation
2790 Mosside Boulevard
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June 22, 1999
OHM Project 919568

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List of Acronyms

DDT-R	Summation of DDD, DDE and DDT
DET	The Charleston Detachment
ENSYS	Strategic Diagnostics, Inc.
FFCA	Federal Facilities Compliance Agreement
IT	International Technology
JSA	Job Safety Analysis
NTCB	Former Naval Training Center Bainbridge
OHM	OHM Remediation Services Corporation
PAH	Polyaromatic Hydrocarbon
PCB's	Polychlorinated Biphenyls
PPE	Personal Protective Equipment
ppm	Parts per million
RCRA	Resource Conservation Recovery Act
RPM	Remediation Program Manager
T&D	Transportation and Disposal
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TEC	The Environmental Company
TPH	Total Petroleum Hydrocarbon
USEPA	United States Environmental Protection Agency

1.0 Introduction

OHM Remediation Services Corporation (OHM) has been contracted by the Navy to perform various soil removal actions as part of the on-going site cleanup effort at Former Naval Training Center Bainbridge (NTCB). This work is being performed under Contract N62570-93-D-3032, D.O. 137, Modification 9 and earlier modifications.

Detailed procedures for the general work activities for this project can be found in the December 22, 1998, Work Plan Addendum No. 2, and in the April 18, 1997, Work Plan. This new Work Plan Addendum addresses specific work activities for the following sites:

- Pesticide Shop – Building 683
- Salvage Yard Area
- Auto Hobby Shop – Building 760
- Ash Pile Area
- Building 707 - Lead Impacted Soil Area

Work conducted at the Pesticide Shop and Ash Pile Area is a continuation of work described in Work Plan Addendum No. 2. Work conducted at the Auto Hobby Shop is a continuation of the original Work Plan issued in April, 1997. The Salvage Yard Area and Building 707 are new sites not discussed in the previous Work Plan documents.

The location of these work sites is shown on Figure 1. The normal field work for this addendum will be scheduled using a five days per week and 10-hours per day work schedule throughout the five week project duration.

The key contacts for the project include:

- OHM Project Manager
  Larry Stearns
  The IT Group
  2790 Mosside Boulevard
  Monroeville, PA 15146-2792
  412-380-6250 voice
  412-380-6099 fax

- Navy RPM
  Frank Zepka
  EFA Chesapeake - Code 18
  NAVFACENGCOM - Building 212
  901 M Street S.E.
  Washington, D.C. 20374-5018
  202-685-3279 voice
  202-433-7018 fax

The actual field work, which is discussed in detail in Section 3.0, will begin on 14-Jun-99.

2.0 Scope of Field Work

A summary of the basic scope of field work for the various sites is addressed below. Further details are provided in Section 3.0 of this addendum.

Pesticide Shop – Building 683 – Reference Figure 2

- Clearing and site preparation
- Establish baselines and grid system
- Limited pre-excavation field kit screening for DDT-R in the surface soils
- Sample collection and laboratory testing for waste disposal characterization (2 samples)
- Remove upper 7-inches or 24-inches (based on Figure 2) of soil and non-friable asbestos for disposal
- Post excavation field kit confirmation testing for DDT-R
- Removal of soil exceeding cleanup criteria
- Post excavation laboratory verification testing for cleanup criteria
- Transportation and disposal of removed soils and debris
- Placement of backfill to within 7-inches of existing ground surface.
- Site re-grading, seeding and straw mulching.

Salvage Yard Area – Reference Figure 3, 4

- Clearing and site preparation
- Establish baselines and grids
- Sample collection and laboratory testing for waste disposal characterization
- Sample collection and laboratory testing for contaminated soil delineation
- Removal of soil from 7 previously identified areas
- Post excavation laboratory verification testing for cleanup criteria
- Transportation and disposal of removed soils
- Site re-grading, seeding and straw mulching

Auto Hobby Shop – Building 760 – Reference Figure 5

- Sample collection and laboratory analyses from hillside

Ash Pile Area – Reference Figure 6

- Re-establish sample points AP-1 and AP-8
- Remove up to 100 tons of soil around these two points
- Off-site transportation and disposal
- Post excavation laboratory verification testing for cleanup criteria
- Site re-grading, seeding and straw mulching

Building 707 - Lead Impacted Soil Area – Reference Figure 7

- Clearing and site preparation
- Establish perimeter of soil removal area
- Sample collection and laboratory testing for waste disposal characterization
- Removal of impacted soils
- Off-site transportation and disposal
- Post excavation laboratory verification testing for cleanup criteria
- Site re-grading, seeding and straw mulching

2.1 Sequence of Activities

The field work for these removal actions is expected to require approximately five weeks. However there may be gaps in the work continuity while awaiting analytical results, regulatory reviews and approvals, or resolution of scope issues. The following general sequence of key activities may be modified as necessary with the approval of the project manager to minimize delays and maximize productivity:

- Sample collection and analysis for waste disposal characterization (Pesticide Shop, Salvage Yard Area and Building 707)
- Mobilization and site setup
- Pesticide Shop – additional field kit screening of grid column 18
- Pesticide Shop - field mark northwest edge of pesticide soil removal work
- Auto Hobby Shop - laboratory analyses of soil samples
- Pesticide Shop - removal of upper 7-inches of soil and debris
- Pesticide Shop - field screening and laboratory verification analyses
- Salvage Yard Area - clearing and site setup
- Building 707 - clearing and site setup
- Ash Pile Area - re-establish previous post excavation sample locations
- Ash Pile Area - removal of additional ash material
- Ash Pile Area - laboratory verification analyses
- Pesticide Shop - additional removal of pesticide impacted soils
- Pesticide Shop - field screening and laboratory verification analyses
- Building 707 - removal of impacted soils
- Building 707 - laboratory verification analyses
- Salvage Yard Area - removal of impacted soils
- Salvage Yard Area - laboratory verification analyses
- Ash Pile Area – re-grading, seed and straw mulch
- Pesticide Shop - final removal of pesticide impacted soils
- Pesticide Shop - final field screening and laboratory verification analyses
- Transportation and disposal of impacted soils and materials
- Salvage Yard Area – re-grading, seed and straw mulch

- Building 707 – re-grading, seed and straw mulch
- Pesticide Shop – re-grading, seed and straw mulch
- Site tear-down and demobilization.

2.2 Cleanup Criteria

The cleanup criteria for the various removal action sites is given in Table 1. The laboratory verification sample results will be compared to the Table 1 values. Field screening will be conducted at the Pesticide Shop only. If the results of the field screening for DDT-R are greater than 10 parts per million (ppm), additional excavation will be conducted without laboratory analysis. If the field screening results are less than 10 ppm, additional laboratory confirmation analysis will be performed.

Table 1: Cleanup Criteria

Removal Action Site	Chemical of Concern	Cleanup Criteria (mg/kg)	SW-846 Test Method
Pesticide Shop – Building 683	DDT	4.3	8081
Pesticide Shop – Building 683	DDE	16.3	8081
Pesticide Shop – Building 683	DDD	23.1	8081
Pesticide Shop – Building 683	Alpha Chlordane	4.1	8081
Pesticide Shop – Building 683	Gamma Chlordane	4.1	8081
Pesticide Shop – Building 683	Heptachlor Epoxide	0.4	8081
Salvage Yard Area	Total Antimony	27	6010
Salvage Yard Area	Total Lead	400	6010
Salvage Yard Area	Benzo(a)pyrene	2.0	8310
Ash Pile Area	Total Petroleum Hydrocarbon	100	8015
Building 707 Area	Total Lead	400	6010

The soil sampling for the Auto Hobby Shop – Building 760 is part of the previously initiated post excavation verification analyses work and does not have a cleanup criteria associated with it.

3.0 Site Work Activities

The following sections provide detailed discussions of the work to be performed. For the Building 683 - Pesticide Shop work, this discussion replaces that previously prepared in Work Plan Addendum No. 2 [22-Dec-98].

3.1 Waste Disposal Characterization

Four composite soil samples will be prepared on-site from samples collected as given below in Table 2. The purpose of the composites is to give a representation of the likely waste stream composition and provide approximately 1 composite sample per 1000 tons of waste. In addition, two water samples will be collected and analyzed for disposal characterization during the field work if necessary. These samples will be obtained from water removed from the excavations and stored on-site.

All samples will be collected, handled, and shipped to the laboratory using the standard OHM corporate procedures unless approved otherwise by the OHM Project Manager via memorandum. All samples will be collected from 0 to 6-inches below grade except for the two samples at the pesticide shop, which will be collected from 7 to 12-inches and 12 to 18-inches below grade and none will include debris, roots, leaves, asphalt, or other material non-representative of the waste. Analytical data is attached for sample BAIN683 DISP, representing the 0 to 7-inches below grade sample collected earlier from within the approximate perimeter of the Pesticide Shop - Building 683.

Table 2: Waste Disposal Characterization Composite Samples

Composite ID	Sample Location	Sample Composite
WDC – 01	Pesticide Shop – Bld. 683	G-16
	Pesticide Shop – Bld. 683	H-13
	Pesticide Shop – Bld. 683	D-10
WDC – 02	Pesticide Shop – Bld. 683	G-2
	Pesticide Shop – Bld. 683	H-6
	Pesticide Shop – Bld. 683	D-6
WDC – 03	Salvage Yard Area	2-SS-4
WDC – 03	Salvage Yard Area	2-SS-15
WDC – 04	Bld. 707 – Lead Soil Area	Previous hot spot stake

The four composite samples will be tested by the laboratory on a 14-day turn-around-time for the parameters given in Table 3. The test results will be faxed to the Bainbridge Site, OHM Project Manager, OHM Transportation and Disposal (T&D) Coordinator, and to the Navy Remediation Program Manager (RPM) by the laboratory. The laboratory will deliver two unbound copies of the final hardcopy laboratory report to the OHM Project Manager within two calendar weeks of completing the analytical work.

Table 3: Analytical for Waste Disposal Characterization Composite Samples

Analysis	Analytes	SW-846 Method	Standard Methods
TCLP	Volatiles	1311/8260	
	Semivolatiles	1311/8270	
	Pest/Herb	1311/8081/8151	
	Metals	1311/6010/7470	
Additional TCLP Metals	Copper, Nickel, Zinc	1311/6010	
RCRA Characteristics	Ignitability	1010/1020 or equal	
	Reactivity	Chapter 7	
	pH	9045	150.1
TCL Organics	Volatiles	8260	
	Semivolatiles	8270	
	Pesticides	8081	
	PCB's	8082	
Total Solids			160.3

3.2 Building 683 –Pesticide Shop Remediation

The pesticide and asbestos impacted soils at the Pesticide Shop will be excavated for off-site disposal at a Resource Conservation Recovery Act (RCRA) Subtitle D landfill as non-hazardous waste, or as otherwise directed by the Navy via a Technical Directive on a Field Form. A row of silt fence will be installed around the perimeter of the excavation areas. All work at the Pesticide Shop will be performed in Level D+ Personal Protective Equipment (PPE) prior to and after

excavation work, and in Level C PPE during excavation work, unless approved otherwise by the OHM Project Manager [see Health and Safety Plan Addendum and Job Safety Analysis (JSA)].

First, the top 7 or 24-inches of soil and debris, designated in Figure 2, will be removed to meet the asbestos Federal Facilities Compliance Agreement (FFCA) remediation goals. The Charleston Detachment (DET) and The Environmental Company (TEC) will establish boundary stakes and field limits for this work and provide documentation as needed [see Section 3.2.1 below for details]. If possible, the removed soil will be loaded for transportation to the disposal facility, otherwise it will be stockpiled until load-out is arranged.

Several structures exist within the excavation limits. These include a drop inlet in grid B4, a manhole in grid G20, and a concrete pad in grids F6 and F7. The sediments will be removed from the bottom of the manhole and the drop inlet if feasible. The manhole will be left active as long as the vertical excavation surrounding it does not jeopardize the structure. If feasible, the exposed portion of the drop inlet will be broken off, and the pipe will be blocked with concrete. The concrete pad will remain in place.

Once the top part of the soil has been removed from within the excavation boundaries, the grid system will be re-established within the excavation area in order to locate the green, blue and orange grids previously identified from Sheet 2 of 5 Supplemental Surface Sampling dated 18-Feb-99. The grids will be sampled as discussed in Section 3.2.3 below. Excavation will continue in the grids that have not achieved the cleanup criteria identified in Section 2.2 of this Addendum. Upon completion and approval of the verification sampling and analysis, the area will be backfilled to 7 inches below the original grading.

3.2.1 Coordination for Asbestos Removal Work

The removal of the upper 7-inches of soil will be coordinated with the following personnel:

- David Gabrielli
  Charleston Detachment (DET)
  410-378-9205
  NTCB Office -- Quarters K at Main Gate
- Steve Bliley
  The Environmental Company (TEC)
  410-378-2257
  NTCB Office -- Quarters K at Main Gate

The non-friable asbestos [transite] removal work is being performed under the FFCA between the Navy and the United States Environmental Protection Agency (USEPA) - Region 3. The Building 683 - Pesticide Shop work is within Parcel 7 Excavation Area 7-11 of the FFCA document. A copy of this document will be provided to OHM by the Navy and will be maintained in the OHM office trailer at the Camp Rogers Drill Field.

The area currently anticipated for the removal of pesticide impacted soils is partially within an area bounded by the transite removal survey stakes given in Table 4. These stakes were previously set by others and are tall, numbered, and painted orange on top.

Table 4: Perimeter Transite Removal Survey Stakes at Pesticide Shop

Point Number	Easting	Northing	Description
489	651566.46	1057227.31	Green
491	651798.44	1057362.8	Green
492	651634.01	1057597.07	Green
493	651513.53	1057524.47	Green
490	651627.16	1057295.77	Green

In addition, there are other similar transite survey stakes in the general vicinity of the Pesticide Shop work area [e.g., 495 and 497 to the southeast]. OHM will coordinate with DET to locate these stakes and mark them conspicuously to minimize the risk of their being lost during the remediation work.

The northwest edge of the pesticide impacted soil removal work is currently uncertain, but the DET needs to excavate Parcel 7-11 as soon as possible. To facilitate this work, upon mobilization OHM will expedite performing the field kit DDT-R screening of the surface soils in grid Column 18 [and beyond as is necessary] to complete the delineation of the pesticide impacted area. The DET will then remove transite impacted soil up to the northwestern boundary marked in the field jointly by OHM and DET. Currently, it is anticipated this boundary will be near the line drawn between stakes 489 and 491.

On 16-Jun-99, a Preconstruction Meeting will be held with appropriate representatives from OHM, DET, and TEC prior to the initiation of soil removal at the Pesticide Shop area to assure the scope and procedures are understood by all participants.

All OHM/International Technology (IT) employees who are directly involved with the asbestos removal work [e.g., site supervisor, foreman, equipment operator, laborers, surveyor, etc] must receive approximately 2-hours of Asbestos Awareness Training. This federally required training is provided by the OHM Health and Safety Department prior to employees participating in any asbestos site related work. Currently this training is planned for 15-Jun-99 at the OHM project trailer on the Camp Rogers Drill Field with Mr. Robert Brooks instructing. Attendance is mandatory for employees without documented equivalent prior training.

The following procedure is mandatory and incorporates the requirements of the asbestos portion of the FFCA:

1. OHM will coordinate with DET to mark the northwest edge of the pesticide impacted soil removal work as soon as possible.

2. OHM will brush hog the site.

3. TEC will place grading stakes in the grids per the FFCA requirements.

4. TEC will video tape the remediation area prior to OHM removing any soil.

5. OHM will remove the upper 7-inches of soil guided by the grading stakes. The grading stakes will not be disturbed. To the extent practicable, sharp and vertical walls will be left at the perimeter of the excavation area. OHM will transport and dispose of the removed soil as non-hazardous waste to a RCRA Subtitle D landfill, unless directed otherwise by the Navy via a Technical Directive on a Field Form. **OHM shall clearly mark on each manifest: "Contains non-friable asbestos" along with the waste description for pesticides.**

6. TEC will inspect the remediation area following the stripping of the upper 7-inches of soil. TEC will notify OHM if and where additional soil removal is needed. OHM will remove the additional soil until TEC approves.

7. TEC will video tape the finished excavated area.

8. OHM may immediately continue with pesticide impacted soil removal work to whatever depths greater than 7-inches are necessary to achieve the Table 1 cleanup criteria. However, the grading stakes and other transite related survey stakes will not be disturbed until the USEPA - Region 3 has inspected the area.

9. USEPA - Region 3 will inspect the excavation area within approximately 2-weeks following completion of removing the upper 7-inches of soil.

3.2.2 Confirmation and Verification

Following the asbestos soil excavation to a depth of 7-inches, confirmation and verification analysis will be performed to guide any further excavation for disposal. Soil samples will be collected from the center in each of the nine (9) 60' x 60' sampling blocks and from the three (3) 40' x 60' sampling blocks, indicated in Figure 2, for confirmation field kit screening (DDT-R). These samples will be obtained from a depth of 0 to 6 inches below the excavation floor. If the field screening result is greater than 10 (ppm) DDT-R, an additional six inches of soil will be removed from the sampling block and the field screening test repeated. If the result is between 1.0 ppm and 10 ppm, the sample will be sent to the laboratory for confirmation analysis. When the field screening results are below 1 ppm DDT-R, no additional excavation will be required in the floor of that block. At this point, sidewall samples will be collected at the locations shown on Figure 2. These sidewall samples will be field screened for DDT-R, then the samples designated for laboratory analysis [shown on Figure 2] will be submitted to the off-site laboratory for confirmation analysis. The laboratory analysis for the floor and sidewall samples will include Total Pesticides and Target Analyte List (TAL) Metals, as indicated on Figure 2. In addition several outlyer grid samples [grids beyond the excavation blocks] will be collected and analyzed for pesticides. The locations of these outlyer samples [5 locations] are shown on Figure 2.

All work will be performed under the direction of the OHM Senior Chemist on-site. The field confirmation test kits used will be the Strategic Diagnostics, Inc. immunoassay (ENSYS) kits calibrated to 0.2, 1.0 and 10.0 ppm of DDT-R in soils.

3.3 Salvage Yard Area

All work at the Salvage Yard Bins will be performed in Level D+ PPE prior to and after excavation work, and in Level C PPE during excavation work, unless approved otherwise by the

OHM Project Manager [see Health and Safety Plan Addendum and JSA]. Workers will take particular precautions for poison ivy and ticks in the Salvage Yard Area.

Clearing and grubbing will be performed as necessary to perform the removal action. Removed vegetation will be stacked outside the bins and away from the work areas. A stone construction entrance will be installed.

Soil will be removed to a depth of 1-foot from 20' x 20' grids centered on the existing sampling stakes given in Table 5. Areas outside of the concrete walls will be ignored. Sample locations are indicated in Figure 4. The soil will be disposed of at an off-base RCRA Subtitle D landfill as non-hazardous waste, unless directed otherwise by the Navy via a Technical Directive on a Field Form.

Table 5: Soil Removal Locations at the Salvage Yard Area

Excavation Location	Existing Sample Stake ID	Verification Testing Required
East Bin	2-SS-4	Total Lead/6010, PAH/8310
East Bin	2-SS-14	Total Lead/6010
East Bin	2-SS-15	Total Lead/6010, PAH/8310
West Bin	2-SS-6	Total Lead/6010
West Bin	2-SS-7	Total Lead and Antimony/6010, PAH/8310
East Bin	2-SS-16	Total Lead/6010

Following completion of the soil removal, one grab soil sample will be collected from the floor of each excavation area. Additionally, one grab surface soil sample will be collected from each of the walls of the excavation and combined to form a composite sample. These samples are illustrated in Figure 4 and will be labeled. The two samples from each excavation area [the floor sample and the composite wall samples] will be analyzed and the results will be discussed with the Navy to determine whether or not additional excavation is necessary.

The samples will be sent to the laboratory for verification testing for the parameters Polyaromatic Hydrocarbon (PAH), (SW-846), Method 8310 and Total Lead and Total Antimony, (SW-846), Method 6010 as indicated in Table 5 on a 7-day turn-around-time. The test results will be faxed to the Bainbridge Site, OHM Project Manager and the Navy RPM by the laboratory. The

laboratory will deliver two unbound copies of the final hardcopy laboratory report to the OHM Project Manager within two calendar weeks of completing the analytical work.
Upon achieving the cleanup criteria, the disturbed areas will be rough graded and backfilled to minimize public safety risks, seeded with grass, and mulched with straw.

3.4 Ash Pile Area

The previous post excavation sampling points AP-1 and AP-8 will be re-established and staked in the field. Soil will be excavated from a 30-foot square area [centered on each stake] to a depth of 1-foot below grade. This is approximately 100-tons of soil total for disposal [approximately 5 truck loads]. This disposal quantity will not be exceeded without a Navy authorized scope increase on a Field Form. The removed soil will be disposed of off-base at a RCRA Subtitle D landfill as non-hazardous waste, unless otherwise directed by the Navy via a Technical Directive on a Field Form.

Following soil removal, one grab sample will be collected from the floor of each excavation. The samples will be labeled AP-1A and AP-8A respectively. The samples will be sent to the laboratory for Total Petroleum Hydrocarbon (TPH), [SW-846, Method 8015, Modified] for 3-day turn-around-time. The test results will be faxed to the Bainbridge Site, OHM Project Manager and the Navy RPM by the laboratory. The laboratory will deliver two unbound copies of the final hardcopy laboratory report to the OHM Project Manager within two calendar weeks of completing the analytical work.

Disturbed areas will be re-graded and vegetated during the restoration of the Gate 27 borrow pit area under Delivery Order 168.

3.5 Building 707 - Lead Impacted Soil Area

Clearing and grubbing will be performed as needed to access the site. Soil will be removed from approximately a 7 foot radius around the existing center stake [inside the area surrounded by the three large trees] to a 1 foot depth at the center decreasing to a 6 inch depth at the edge. The soil will be disposed of at an off-base RCRA Subtitle D landfill as non-hazardous waste, unless otherwise directed by the Navy via a Technical Directive on a Field Form.

Following soil removal, four grab soil samples will be collected from the floor of the excavation. The samples will be labeled 707-01 through 707-04. Samples will be sent to the laboratory for Total Lead analysis [SW-846, Method 6010] on a 3-day turn-around-time. The test results will be faxed to the Bainbridge Site, OHM Project Manager and the Navy RPM by the laboratory. The laboratory will deliver two unbound copies of the final hardcopy laboratory report to the OHM Project Manager within two calendar weeks of completing the analytical work.

Following verification of achieving the cleanup criteria in Table 1, the disturbed areas will be backfilled and regraded to minimize public safety risks [but not backfilled], seeded with grass, and mulched with straw.

3.6 Auto Hobby Shop - Building 760

Five grab soil samples will be collected from 6 to12-inches below grade [i.e., from below the backfill] on the hillside as shown in Figure 5. The samples will be labeled 025-01 through 025-05. Each sample will be tested for TAL Metals [SW-846, Method 6010/7471] on a 14-day turn-around-time.

The test results will be faxed to the Bainbridge Site, OHM Project Manager and the Navy RPM by the laboratory. The laboratory will deliver two unbound copies of the final hardcopy laboratory report to the OHM Project Manager within two calendar weeks of completing the analytical work.

Areas disturbed during sampling will be seeded with grass and mulched with straw.

FIGURES

IMAGE	X-REF	OFFICE	DRAWING NUMBER
---	---	Pittsburgh, PA	19568-B6

SALVAGE/STORAGE AREA

PESTICIDE SHOP

AUTO HOBBY SHOP

BUILDING NO. 707 AREA

ASH PILE AREA

CECIL COUNTY COMMUNITY COLLEGE: TRUCK DRIVING SCHOOL

OPEN SALVAGE STORAGE-SUPPLY

WATER TREATMENT PLANT

EXISTING RESERVOIR WS 373

GATE 19 BLOCKED BY BARRIER

LEGEND:

- WETLANDS LOCATION
- APPROXIMATE BASE BOUNDARY
- STREAM OR POND
- TRANSMISSION LINE (DELMARVA)
- FORMER BUILDING LOCATION
- EXISTING BUILDING

SCALE
0 500 1000 FEET

PLOT DATE: 6/21/99
FORMAT REVISION 3/25/99

REVISIONS				
REV	DATE	BY	CHK'D	APR'VD	DESCRIPTION /ISSUE

OHM Remediation Services Corp.
PROJECT NO. 19568

DESIGNED BY	D.W.Pringle	6/9/99
DRAWN BY	B.B.O'Connor	6/9/99
CHECKED BY		
APPROVED BY		

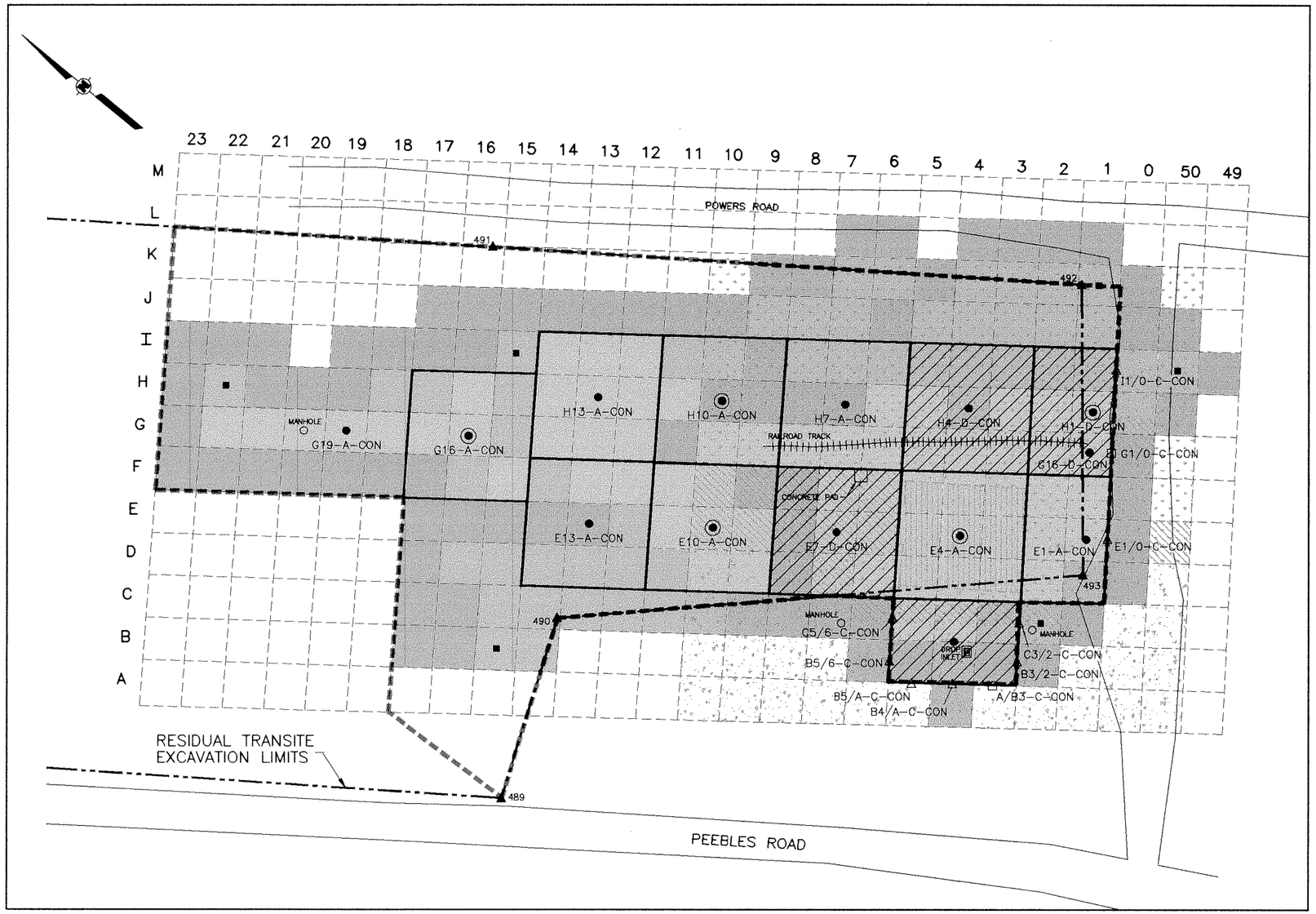
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA
NAVAL STATION EFA - CHESAPEAKE PORT DEPOSIT, MARYLAND
NAVAL TRAINING CENTER - BAINBRIDGE SOIL REMOVAL ACTION

SITE LOCATIONS

SCALE:	SIZE:
AS SHOWN	B

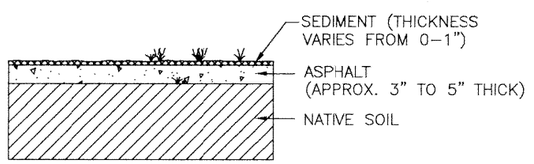
DELIVERY ORDER NO. 137
CONSTR. CONTRACT NO. N62470-93-D-3032
NAVFAC DRAWING NO.
SHEET I.D. FIGURE 1

IMAGE	X-REF	OFFICE	DRAWING NUMBER
---	---	Pittsburgh, PA	19568-D9A



PESTICIDE SHOP BUILDING 683

SCALE
0 30 60 FEET



TYPICAL SECTION COMPETENT ASPHALT AREA

N.T.S

LEGEND:

- APPROXIMATE PERIMETER OF BUILDINGS; CAN NOT BE FIELD VERIFIED
- LIMIT OF INITIAL 7 INCH EXCAVATION
- RESIDUAL TRANSITE EXCAVATION LIMITS
- 492 ▲ ASBESTOS EXCAVATION CORNER STAKE
- GRID WITH SAMPLE RESULTS <1 ppm
- GRID WITH SAMPLE RESULTS >1 ppm & <10 ppm
- GRID WITH SAMPLE RESULTS >10 ppm
- GRASS/ROCKS
- FORMER BUILDING
- ASPHALT
- DETERIORATED ASPHALT
- DETERIORATED ASPHALT WITH VEGETATION
- SAMPLING BLOCK AND SAMPLING LOCATIONS
- BLOCKS TO BE EXCAVATED TO A DEPTH OF 24 INCHES BELOW GROUND SURFACE
- SAMPLING LOCATION REQUIRING ADDITIONAL PESTICIDE AND TAL METALS ANALYSIS (LABORATORY)
- OUTLYER SAMPLING LOCATION REQUIRING LABORATORY CONFIRMATION ANALYSIS FOR PESTICIDES
- FLOOR SAMPLE LOCATION (LABORATORY PESTICIDE ANALYSIS)
- △ SIDEWALL CONFIRMATION SAMPLE LOCATION (FIELD TEST KIT)
- □ SIDEWALL CONFIRMATION SAMPLE LOCATION (FIELD TEST KIT AND LABORATORY ANALYSIS)

NOTE:

A SOIL SAMPLE WILL BE OBTAINED FROM EACH BLOCK SAMPLE LOCATION. IF THE FIELD SCREENING RESULTS ARE GREATER THAN 10 PARTS PER MILLION (ppm) DDT-R, ADDITIONAL EXCAVATION WILL BE PERFORMED WITHIN THE BLOCK. IF THE RESULTS ARE BETWEEN 1.0 ppm AND 10 ppm, THE REMAINING SAMPLE WILL BE SENT TO THE LABORATORY FOR CONFIRMATION ANALYSIS. IF THE FIELD SCREENING RESULTS ARE LESS THAN 1.0 ppm DDT-R, SAMPLES WITH THE □ DESIGNATION WILL BE SENT TO THE LABORATORY FOR CONFIRMATION ANALYSIS.

REV	DATE	BY	CHK'D	APPR'D	DESCRIPTION/ISSUE

REVISIONS

OHM Remediation Services Corp.
PROJECT NO. 775910

DESIGNED BY	J.S.Wright	1/21/99	CHECKED BY	D.M.Pringle	6/18/99	APPROVED BY
DRAWN BY	JS/BBO	1/21/99				

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND WASHINGTON D.C.
NAVAL STATION EFA - CHESAPEAKE
NAVAL TRAINING CENTER - BAINBRIDGE PORT DEPOSIT, MARYLAND
SOIL REMOVAL ACTION
PESTICIDE SHOP/BUILDING NO. 683

EXCAVATION LIMITS AND SAMPLING LOCATIONS

SCALE:	SIZE:
AS SHOWN	D

DELIVERY ORDER NO. 137
CONSTR. CONTRACT NO. N62470-93-D-3032
NAVFAC DRAWING NO.
SHEET I.D.
FIGURE 2

PLOT DATE: 6/21/99
FORMAT REVISION 3/25/99

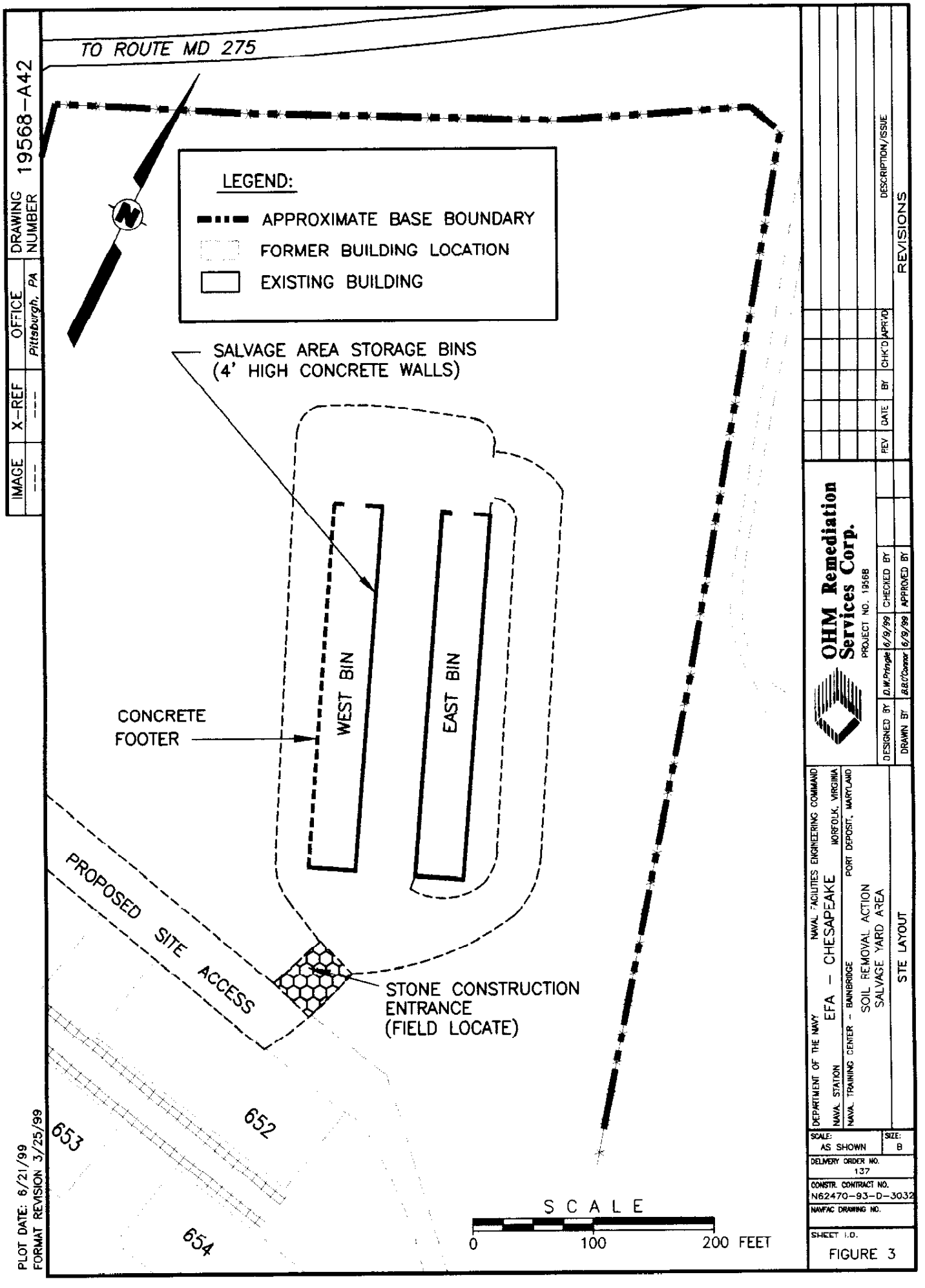


IMAGE	X-REF	OFFICE	DRAWING NUMBER
---	---	Pittsburgh, PA	19568-A42

REVISIONS				
REV	DATE	BY	CHK'D	APP'VD

DESCRIPTION/ISSUE

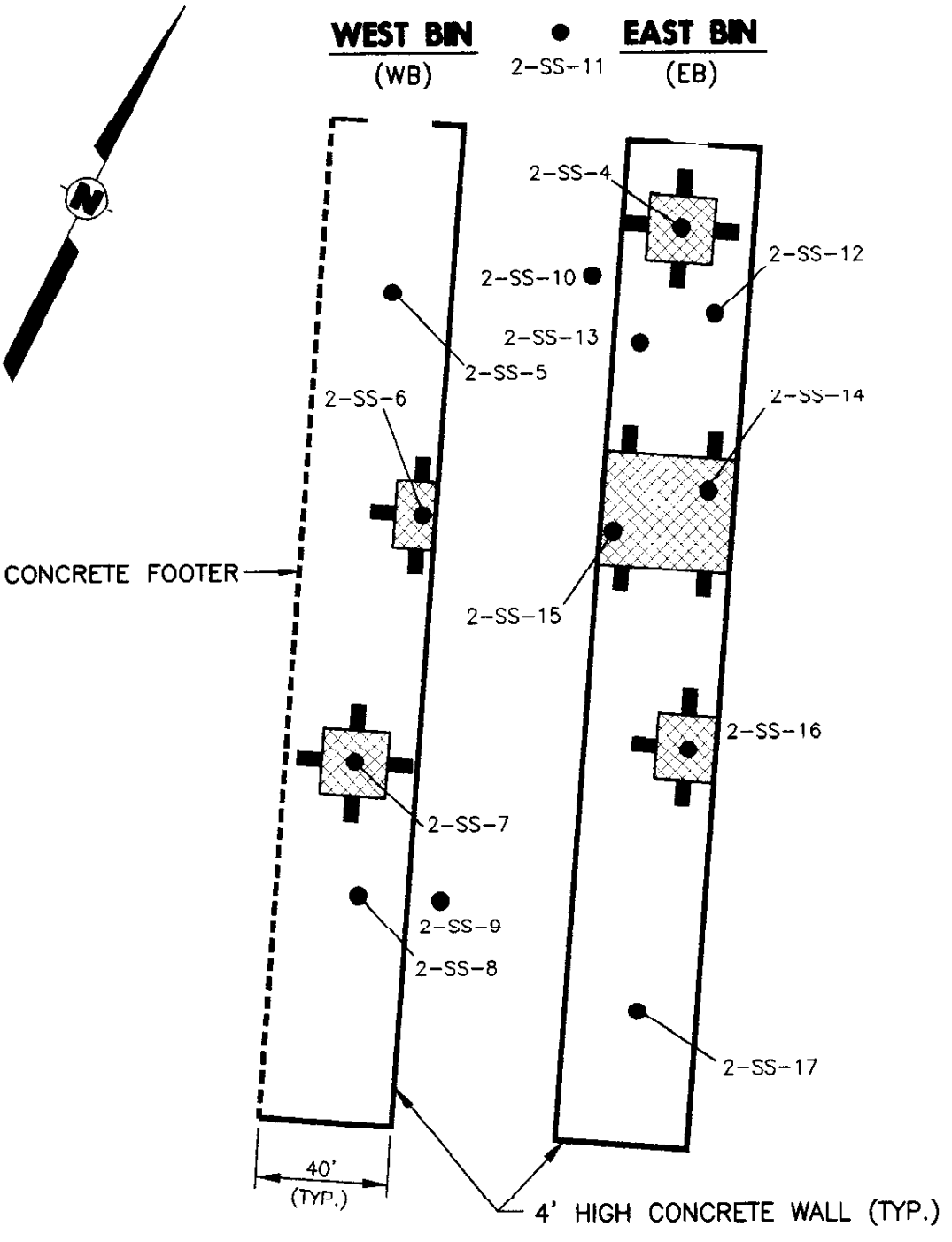
OHM Remediation Services Corp.
PROJECT NO. 19568

DESIGNED BY	D.M.Pringle 6/9/99	CHECKED BY	
DRAWN BY	B.B.O'Connor 6/9/99	APPROVED BY	

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVA. STATION EFA - CHESAPEAKE NORFOLK, VIRGINIA
NAVA. TRAINING CENTER - BAINBRIDGE PORT DEPOSIT, MARYLAND
SOIL REMOVAL ACTION
SALVAGE YARD AREA
STE LAYOUT

SCALE: AS SHOWN	SIZE: B
DELIVERY ORDER NO. 137	
CONSTR. CONTRACT NO. N62470-93-D-3032	
NAVFAC DRAWING NO.	
SHEET I.D. FIGURE 3	

PLOT DATE: 6/21/99
FORMAT REVISION 3/25/99



SCALE

0 50 100 FEET

NOTES:

1. INITIAL EXCAVATION WILL INVOLVE REMOVING 12 INCHES OF CONTAMINATED SOIL IN THE GRIDS SHOWN.
2. ONE GRAB SAMPLE WILL BE OBTAINED FROM THE CENTER OF EACH EXCAVATION FOR ANALYSIS. IN ADDITION, COMPOSITE SOIL SAMPLES WILL BE COLLECTED FROM THE WALLS OF EACH EXCAVATION. THESE COMPOSITES WILL BE FORMED FROM THE GRAB LOCATIONS SHOWN ON THE DRAWING.
3. ALL GRIDS SAMPLED WILL BE ANALYZED FOR TOTAL LEAD. IN ADDITION, SAMPLE LOCATIONS 2-SS-4, 2-SS-7, AND 2-SS-15 WILL BE ANALYZED FOR PAH's, AND SAMPLE LOCATION 2-SS-7 WILL BE ANALYZED FOR TOTAL ANTIMONY.

LEGEND:

- 2-SS-6 ● PREVIOUS SURFICAL SOIL SAMPLE LOCATION
- ■ COMPOSITE WALL SAMPLE LOCATION
- GRID TO BE EXCAVATED THEN SAMPLED (20'x20' OR AS SHOWN)

IMAGE	X-REF	OFFICE	DRAWING NUMBER
---	---	Pittsburgh, PA	19568-A41

REVISIONS

REV	DATE	BY	CHK'D	APRV'D	DESCRIPTION/ISSUE

OHM Remediation Services Corp.
PROJECT NO. 19568

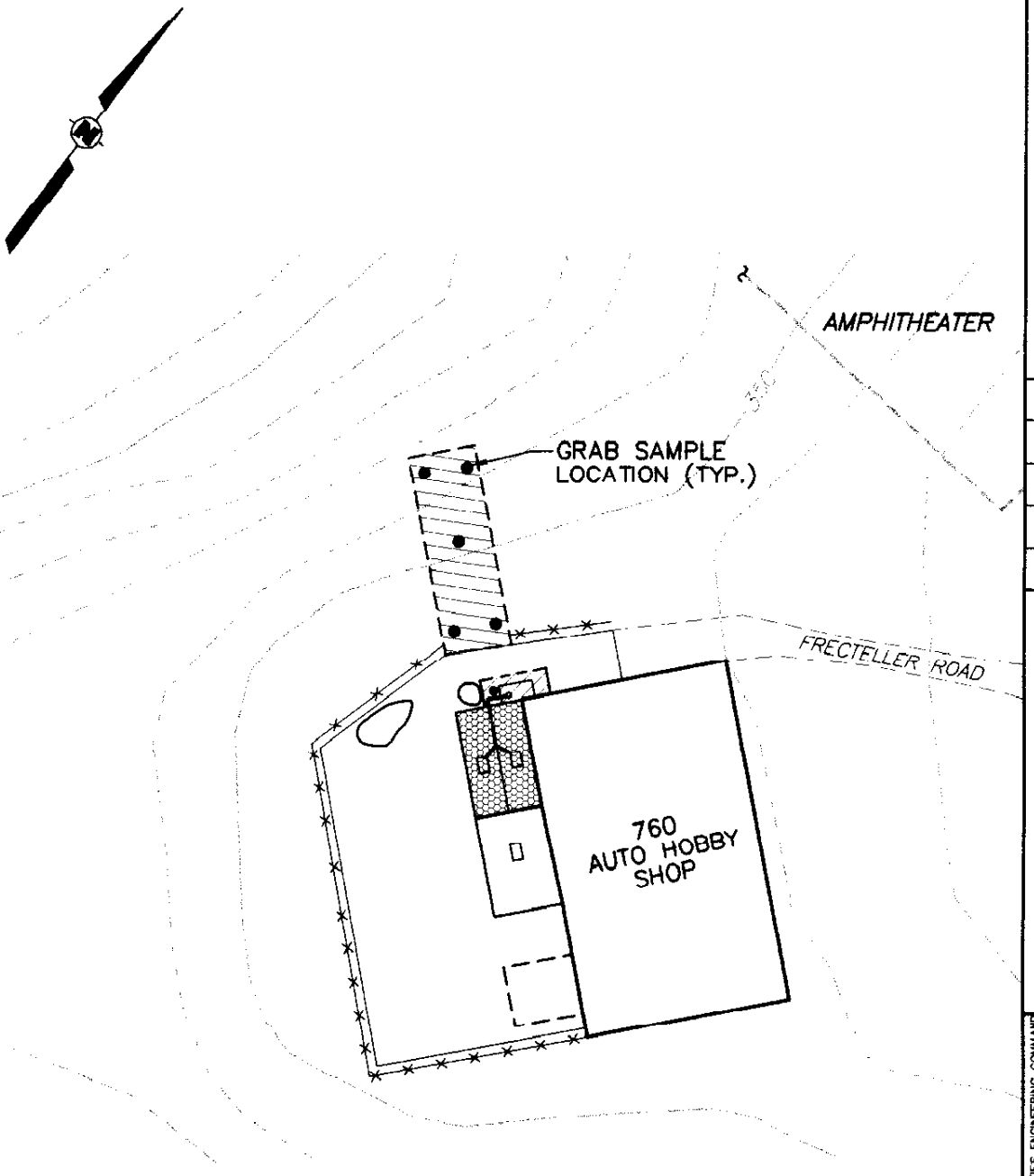
DESIGNED BY	--	--	CHECKED BY	D.W.Pringle 6/9/99
DRAWN BY	B.B.O'Connor 6/9/99		APPROVED BY	

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
EFA -- CHESAPEAKE NORFOLK, VIRGINIA
NAVAL STATION PORT DEPOSIT, MARYLAND
NAVAL TRAINING CENTER - BAINBRIDGE
SOIL REMOVAL ACTION
SALVAGE YARD AREA

EXCAVATION LIMITS AND SAMPLING LOCATIONS

SCALE: AS SHOWN	SIZE: A
DELIVERY ORDER NO. 137	
CONSTR. CONTRACT NO. N62470-93-D-3032	
NAVFAC DRAWING NO.	
SHEET I.D. FIGURE 4	

PLOT DATE: 6/22/99
FORMAT REVISION 3/25/99



LEGEND:

- SOIL SAMPLE LOCATION

NOTE:

SUBSURFACE SOIL SAMPLES WILL BE OBTAINED FROM THE NATIVE SOILS BELOW THE PREVIOUS BACKFILL WHICH IS APPROXIMATELY 6 TO 12 INCHES.

SCALE

0 50 100 FEET

IMAGE	X-REF	OFFICE	DRAWING NUMBER
---	---	Pittsburgh, PA	19568-A39

REVISIONS

REV	DATE	BY	CHK'D	APPR'D	DESCRIPTION/ISSUE

OHM Remediation Services Corp.
PROJECT NO. 19568

DESIGNED BY	B.R.Harris	1/29/99	CHECKED BY	D.M.Pringle 1/29/99
DRAWN BY	B.B.O'Connor	1/29/99	APPROVED BY	

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
EFA - CHESAPEAKE
NORFOLK, VIRGINIA
NAVAL STATION
NAVAL TRAINING CENTER - BAINBRIDGE
PORT DEPOSIT, MARYLAND
SOIL REMOVAL ACTION
AUTO HOBBY SHOP - BUILDING NO. 750
ADDITIONAL SAMPLING LOCATIONS

SCALE: AS SHOWN	SIZE: A
DELIVERY ORDER NO. 137	
CONSTR. CONTRACT NO. N62470-93-D-3032	
NAVFAC DRAWING NO.	
SHEET I.D. FIGURE 5	

PLOT DATE: 6/22/99
FORMAT REVISION 3/25/99

APPENDIX A
SITE-SPECIFIC HEALTH AND SAFETY PLAN

APPENDIX A
SITE-SPECIFIC HEALTH AND SAFETY PLAN

DRAFT
SITE SPECIFIC HEALTH AND SAFETY PLAN
AMMENDMENT # 2
FOR
Delivery Order No. 137
Modification 9

Submitted to:

DEPARTMENT OF THE NAVY
Atlantic Division
Contract No. N62470-93-D-3032
EFA Chesapeake - NAVFACEGCOM
901 M Street S.E. - Building 212
Washington, D.C. 20374-5018

Submitted by:

OHM Remediation Services Corp.
200 Horizon Center Boulevard
Trenton, New Jersey 08691-1904

Prepared By:

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Reviewed by:

Lawrence Stearns, PE
Project Manager

John Franz, PE
Program Manager

June 4, 1999
OHM Project # 919568

OHM Remediation Services Corp.
A Subsidiary of the IT Group

TABLE OF CONTENTS

APPENDICES

1.0 INTRODUCTION/SCOPE OF WORK

1.1 Introduction

This document serves as an additional amendment to the Health and Safety Plan (HASP) for NTC Bainbridge Job # 919568 delivery order # 14, dated February 12, 1997. It is intended to augment the original HASP and Amendment # 1 for Modifications 5 & 6. It has been authorized by the Navy through DO 137 Modification # 9. Unless it is specifically identified in this Amendment, the provisions of the original HASP an amendment # 1 will apply.

1.2 Scope of Work

The additional scope of work under job # 919568 is as follows:

Building 683 - Pesticide Shop

- Clearing and site preparation
- Establish baselines and grid
- Pre-excavation field screening for DDTR soil levels
- Sample collection and laboratory testing for waste disposal characterization
- Remove upper 7-inches of soil and non-friable asbestos for disposal
- Post excavation field kit screening for DDTR soil levels
- Post excavation laboratory verification testing for cleanup criteria
- Removal of soil exceeding cleanup criteria
- Transportation and disposal of removed soils and debris
- Site regrading, seeding, and straw mulching

Salvage Yard Bins

- Clearing and site preparation
- Establish baselines and grids
- Removal of soil from 7 previously identified areas
- Post excavation laboratory verification testing for cleanup criteria
- Site regrading, seeding and straw mulching

Building 760 - Auto Hobby Shop

- Sample collection and laboratory analysis from hillside

Gate 27 Ash Pile Area

- Re-establish sample points AP-1 and AP-8
- Remove soil for disposal around these two points
- Post excavation laboratory verification testing for cleanup criteria
- Site regrading, seeding and straw mulching

Building 707 - Lead Impacted Soil Area

- Clearing and site preparation

- Establish perimeter of soil removal area
- Removal of impacted soils
- Post excavation laboratory verification testing for cleanup criteria
- Site regrading, seeding and straw mulching

2.0 KEY PERSONNEL AND MANAGEMENT

2.1 Key Safety Personnel

The following are changes to key safety personnel and management assigned to the project:

Site Supervisor	John Dormi 410-378-3223 (site phone)
Site Safety Officer	John Dormi 410-378-2332 (site phone)
Program CIH	Paul Lawless, CIH 609-588-6423 (office)

3.0 JOB SAFETY ANALYSIS

3.1 Chemical Hazards

CHEMICAL	PRIMARY EXPOSURE ROUTES	PEL/TLV	HEALTH HAZARDS/ PHYSICAL HAZARDS
Asbestos (Chrysotile)	Inhalation, ingestion	0.1 f/cc	Dyspnea (difficulty breathing), restricted pulmonary function, finger clubbing, irritation of the eyes, potential occupational carcinogen.
Benzo (a) Pyrene	Inhalation, ingestion	0.2 mg/m3	Respiratory tract irritation. Irritates ski9n and eyes with burning sensation on contact.
Chlordane (Alpha & Gamma)	Inhalation, ingestion, skin and eye contact	0.5 mg/m3	Moderately irritating to eyes and skin. Ingestion, absorption, or inhalation of mist or dust may cause excitability, convulsions, nausea, vomiting, diarrhea, and some irritation of the gastrointestinal tract.
DDD	Inhalation, ingestion	NA	Contact with eyes causes irritation. Ingestion causes delayed symptoms similar to that of DDT.
DDT	Inhalation, ingestion, skin and eye contact	0.5 mg/m3	Very large doses are followed promptly by vomiting, due to local gastric irritation; delayed emesis or diarrhea may occur. With smaller doses, symptoms usually appear 2-3 hours after ingestion. These include tingling of the lips, tongue, and face; malaise, headache, sore throat, fatigue, coarse tremors of the neck, head and eyelids; apprehension, ataxia, and confusion.
Heptachlor Epoxide	Inhalation, ingestion, skin contact	0.5 mg/m3	Tremor, convulsions, liver damage, potential occupational carcinogen.
Lead	Inhalation, ingestion	0.05 mg/m3	Causes skin and eye irritation. Acute inhalation may cause acute encephalopathy with seizures, coma, and death. Reversible kidney damage can occur from acute exposures, as well as anemia. Dust inhalation may cause mucous membrane and upper respiratory tract irritation.

3.3 Physical Hazards

The following physical hazards may be present during job site activities:

- Heat stress
- Biological hazards (Poison ivy/oak, ticks, Lime's disease)
- Noise
- Fire, explosion

- Heavy equipment and vehicle traffic.

3.4 Task-Specific Activity Hazard Analyses (AHA's)

Additional pre-mobilization AHA's are located in Appendix E.

4.0 WORK AND SUPPORT AREAS

There are no changes/amendments to this portion of the original document.

5.0 PROTECTIVE EQUIPMENT

5.1 Anticipated Protection Levels

Task	Initial PPE Level	Upgrade PPE Level	Skin Protection	Respiratory Protection	Other PPE
Mobilization and site set-up	Level D	N/A	Work gloves as needed		Hard hat, safety glasses, steel toed work boots, hearing protection > 85 dBa
Clearing, grubbing, and tree felling	Level D	Level D+	Tyvek suit, work gloves, tape boots and glove areas.		Hard hat, safety glasses, steel toed work boots, hearing protection > 85 dBa
Site survey (Establish baselines and grids)	Level D	Level D+	Tyvek coveralls and work gloves when working with poisonous plants		Hard hat , safety glasses, steel toed work boots, hearing protection > 85 dBa
Excavation of asbestos, and impacted soils	Level D+	Level C	Tyvek coveralls, Surgical and/or nitrile gloves,	Upgrade - Air Purifying Respirator (APR)	Hardhat, safety glasses, steel toed work boots, hearing protection > 85 dBa. Up/down-grade based on air monitoring results (see section 7)

Task	Initial PPE Levels	Upgrade PPE Levels	Skin Protection	Respiratory Protection	Other PPE
Pre and post excavation sampling	Level D+	Level C	Tyvek coveralls, surgical and/or nitrile gloves.	Upgrade: APR	Hardhat, safety glasses, steel toed work boots, hearing protection > 85 dBa. Up/down-grade based on air monitoring levels (see section 7)
Site regrading, seeding and straw mulching	Level D	N/A	Leather gloves	NA	Hard hat, safety glasses, steel toed work boots, hearing protection > 85 dBa
Site restoration	Level D	N/A			Hard hat, safety glasses, steel toed work boots, hearing protection > 85 dBa

6.0 DECONTAMINATION PROCEDURES

6.1 Personal Decontamination

No changes from original HASP.

6.2 Equipment Decontamination

No changes from original HASP.

7.0 AIR MONITORING

7.1 Work Area Monitoring

Work area monitoring at the Bainbridge NTC site under DO 137, Modifications 5 & 6, will include direct reading monitoring for particulate levels in the air. Air monitoring activities will be conducted during contaminated soil excavation activities.

7.1.1 Direct Reading Air Monitoring

During contaminated soil excavation activities direct reading air monitoring will be performed in the EZ to determine exposure to workers. A summary of air monitoring information is provided in the table below:

Monitoring Device	Monitoring Location/ Personnel	Monitoring Frequency	Action Level	Action
Mini-ram	Exclusion Zone/ Recovery Technician, Sample Technician, Equipment Operator	4 times a day for a minimum of 5 minutes	Lead and pesticide soils: < 5.0 mg/m3 ≥ 5.0 mg/m3 < 10 mg/m3 ≥ 10 mg/m3	 Level D Level C Level B

7.1.2 Integrated Sampling

Integrated sampling of personnel is not planned for this project unless direct reading action levels for level C are encountered.

7.2 Perimeter Air Monitoring

Perimeter air monitoring including real time and integrated sampling is not scheduled for this phase of the project..

7.3 Instrumentation

The following is a description of air monitoring equipment to be used at this site.

7.3.1 Portable Total Dust Monitor (Mini Ram)

7.3.1.1 Type and Operational Aspects

Real-Time Aerosol Monitor (Mini Ram Model PDM-3 and Model Pr100 Data Ram)

- Principle of Operation

Detection of light in the near infrared region back-scattered to a sensor (photovoltaic detector) by airborne particulate in a sensing volume

The higher the dust concentration the more back-scattering of light to the sensor, resulting in increased readings

Device calibrated at the factory against an air sampling filter/gravimetric analysis reference method

7.3.1.2 Calibration Methods/Frequencies

There is no calibration method or procedure for calibrating the mini-ram monitor. However, it is recommended that the mini-ram monitor be re-zeroed once a week. During a zero check, the sampled air passes through the purge air filter and dryer to effect a self-cleaning of the optical chamber.

7.3.1.3 Preventative Maintenance

Maintenance of the mini-ran consists of replacement of filters and desiccant; battery replacement; and cleaning of the optical detection assembly.

8.0 EMERGENCY RESPONSE

8.2 Emergency Recognition and Prevention

Table 8.1
Emergency Telephone Numbers

LANTDIV **RPM - Frank Zepka**	**202-685-3279 (office)**
OHM Personnel **Program CIH - Paul Lawless**	**609-588-6391 (office)**

9.0 TRAINING REQUIREMENTS

Personnel who will be involved in the removal of soils with Asbestos Containing Materials (ACM) will be give an Asbestos orientation as per 29CFR1926.1101 for Class IV work.

10.0 MEDICAL SURVEILLANCE PROGRAM

There are no changes/amendments to this portion of the original document.

APPENDIX A
MATERIAL SAFETY DATA SHEETS

APPENDIX B
SPECIFIC HEALTH AND SAFETY PROCEDURES

SOP No. 2-1	Vehicle Safety
SOP No. 2-3	Personal Lifting Safety
SOP No. 2-4	Slip, Trip, Fall Prevention
SOP No. 2-5	Electrical Safety
SOP No. 2-7	Equipment Inspection
SOP No. 3-3	Hearing Conservation Program
SOP No. 3-4	Heat Stress Prevention
SOP No. 4-2	Respiratory Protection
SOP No. 5-4	Decontamination
SOP No. 6-5	Excavation
SOP No. 7-1	High Pressure Washers
SOP No. 7-7	Equipment and Hand Tools
SOP No. 7-9	Solvents and Flammable Liquids
SOP No. 7-11	Buried Utility Location and Associated Subsurface Field Activities
SOP No. 7-14	Equipment Operator Qualification

APPENDIX C
SAFETY PLAN ACKNOWLEDGEMENT

WORKER ACKNOWLEDGEMENT TO HEALTH-AND-SAFETY PLAN

I HAVE READ THE SITE-SAFETY PLAN FOR THIS SITE AND FULLY UNDERSTAND ITS CONTENTS.

Name	Date

APPENDIX D
ACCIDENT PREVENTION PLAN

APPENDIX E
Activity Hazard Analyses

ACTIVITY HAZARD ANALYSIS FOR SITE PREPARATION
DO 137 Modification # 9

Principle Steps	Potential Safety/Hazards	Hazard Control Measures	Personal Protective Equipment	Air Monitoring Devices
Clearing, Grubbing	Struck By/ Against Heavy Equipment	• Use reflective warning vests when exposed to vehicular traffic • Isolate equipment swing areas • Make eye contact with operators before approaching equipment • Understand and review hand signals	Warning vests, Hard hat, safety glasses	
	Slips, Trips, Falls	• Clear walkways, work areas of equipment, tools, vegetation, excavated material, and debris • Mark, identify, or barricade other obstructions		
	Handling Heavy Objects	• Observe proper lifting techniques • Obey sensible lifting limits (60 lb. maximum per person manual lifting) • Use mechanical lifting equipment (hand carts, trucks) to move large, awkward loads		
	Eye Injuries	• Wear face shield, goggles when operating powered clearing / grubbing equipment	Face shield, goggles, Leather gloves, reinforced palms	
	Sharp Objects	• Wear cut resistant work gloves when the possibility of lacerations or other injury may be caused by sharp edges or objects • Maintain all hand and power tools in a safe condition • Keep guards in place during use • Close doors, windows on heavy equipment to prevent injuries from tree branches and other vegetation	Leather gloves, reinforced palms	
	Insect/ Snake Bites	• Review injury potential and types of snakes with workers • Avoid insect nests areas, likely habitats of snakes outside work areas • Emphasize The Buddy System where such injury potential exists • Use insect repellent, wear PPE to protect against sting/bite injuries	Tyvek coveralls, duct tape bottom of coveralls to boots or latex boot covers	

ACTIVITY HAZARD ANALYSIS FOR SITE PREPARATION
DO 137 Modification #9

Principle Steps	Potential Safety/Hazards	Hazard Control Measures	Personal Protective Equipment	Air Monitoring Devices
	Contact Dermatitis	• Wear PPE to avoid skin contact with contaminated soil, plants, or other skin irritants • Identify and review poisonous plants with workers	Tyvek coveralls, duct tape bottom of coveralls to boots or latex boot covers	
	Operations of power clearing tools (chain saws, brush saws...)	• Wear eye, face, hand & hearing protection when operating power clearing equipment • Shut-off / idle power tools walking between work areas • Store flammable liquids in well ventilated areas, away from work areas • Shut off equipment during re-fueling • Prohibit smoking while operating clearing equipment • Provide ABC (or equivalent) fire extinguishers for all work	Face shield, goggles, cloth gloves, ear plugs	
	Operation of chippers	• Lockout/target/de-energize any electrical circuits on chippers before clearing/maintenance • Identify staging area for debris • Keep chipper approach free of ground debris • Follow all precautions for operation of power cleaning tools		
	High Noise Levels	• Use hearing protection when exposed to excessive noise levels (greater than 85 dBA over an 8-hour work period)	Ear plugs	
	High/Low Ambient Temperature	• Monitor for Heat/Cold stress in accordance with OHM Health and Safety Procedures # 3-4, 3-5 • Provide fluids to prevent worker dehydration		
Equipment/ Facility Set-up	Slips, Trips, Falls	• Clear walkways work areas of equipment, tools, vegetation, excavated material and debris • Mark, identify, or barricade other obstructions		

ACTIVITY HAZARD ANALYSIS FOR SITE PREPARATION
DO 137 Modification # 9

Principle Steps	*Potential Safety/Hazards*	*Hazard Control Measures*	*Personal Protective Equipment*	*Air Monitoring Devices*
	Electrical Shock	• De-energize or shut off utility lines at their source before work begins • Use double insulated or properly grounded electric power-operated tools • *Maintain tools in a safe condition* • Provide an equipment-grounding conductor program or employ ground-fault circuit interrupters • Use qualified electricians to hook up electrical circuits • Inspect all extension cords daily for structural integrity, ground continuity, and damaged insulation • Cover or elevate electric wire or flexible cord passing through work areas to protect from damage • Keep all plugs and receptacles out of water • Use approved water-proof, weather-proof type if exposure to moisture is likely • *Inspect all electrical power circuits prior to commencing work* • Follow Lockout-Tagout procedures in accordance with OHM Health and Safety Procedures # 6-4		
	Handling Heavy Objects	• Observe proper lifting techniques • Obey sensible lifting limits (60 lb. maximum per person *manual lifting*) • Use mechanical lifting equipment (hand carts, trucks) to move large, awkward loads		
	Sharp Objects	• Wear cut resistant work gloves when the possibility of lacerations or other injury may be caused by sharp edges or objects • *Maintain all hand and power tools in a safe condition* • Keep guards in place during use	Leather gloves, reinforced palm	
	High Noise Levels	• Use hearing protection when exposed to excessive noise levels (greater than 85 dBA over an 8-hour work period)	Ear plugs	

ACTIVITY HAZARD ANALYSIS FOR SITE PREPARATION
DO 137 Modification # 9

Principle Steps	Potential Safety/Hazards	Hazard Control Measures	Personal Protective Equipment	Air Monitoring Devices
	High/Low Ambient Temperature	• Monitor for Heat/Cold stress in accordance with OHM Health and Safety Procedures # 3-4, 3-5 • *Provide fluids to prevent worker dehydration*		

EQUIPMENT TO BE USED	*INSPECTION REQUIREMENTS*	*TRAINING REQUIREMENTS*
	• Daily equipment inspections •	• Review SSHP with all site personnel • Review site specific AHA with all task personnel

ACTIVITY HAZARD ANALYSIS FOR SITE SURVEY

DO 137 MOD # 9

Task Breakdown	Potential Hazards	Hazard Control Measures	Personal Protective Equipment	Air Monitoring Devices
Survey of Site	Struck By/Against Motor Vehicles/ Operating Equipment	• Use reflective warning vests worn when exposed to vehicular traffic • Isolate potential equipment swing areas • Avoid/isolate survey activities in high traffic areas, warehouse ship/receive areas • Make eye contact with vehicle operators before approaching/crossing high traffic areas • Understand and review hand signals • Emphasize The Buddy System where injury potential exists	Hard hat, safety glasses	
	Slips, Trips, Falls	• Clear walkways, work areas of equipment and tools • Mark, identify, or barricade other obstructions		
	Handling Heavy Objects	• Observe proper lifting techniques • Obey sensible lifting limits (60 lb. maximum per person manual lifting) • Use mechanical lifting equipment (hand carts, trucks) to move large, awkward loads		
	Sharp Objects	• Wear cut resistant work gloves when the possibility of lacerations or other injury may be caused by sharp edges or objects • Maintain all hand and power tools in a safe condition • Keep guards in place during use • Close doors, windows on heavy equipment to prevent injuries from tree branches and other vegetation	Leather gloves, reinforced palms	
	Insect/ Animal Bites	• Review injury potential with workers • Avoid insect nests areas, habitats outside work areas • Emphasize The Buddy System where such injury potential exists • Use insect repellant to protect against sting injuries	Tyvek coveralls, duct tape bottom of coveralls to boots or latex boot covers	

ACTIVITY HAZARD ANALYSIS FOR SITE SURVEY

DO 137 MOD # 9

Task Breakdown	Potential Hazards	Hazard Control Measures	Personal Protective Equipment	Air Monitoring Devices
Site survey (continued)	Contact Dermatitis	• Wear long sleeveshirts / trousers to avoid skin contact with plants or other skin irritants • Identify and review poisonous plants with workers • Avoid unnecessary clearing of plant/vegetation areas • Cover vegetation with plastic(visqueen) where survey position raises exposure potential	Tyvek coveralls, duct tape bottom of coveralls to boots or latex boot covers	
	High/Low Ambient Temperature	• Monitor for Heat/Cold stress in accordance with OHM Health and Safety Procedures # 3-4, 3-5 • Provide fluids to prevent worker dehydration		

EQUIPMENT REQUIRED	INSPECTION REQUIREMENTS	TRAINING REQIREMENTS
•		• Review AHA with ll task personnel •

ACTIVITY HAZARD ANALYSIS FOR PRE AND POST EXCAVATION SAMPLING
REESE AFB TASK ORDER 54

Task Breakdown	Potential Hazards	Hazard Control Measures	Personal Protective Equipment	Air Monitoring Devices
Pre and Post Excavation Sampling	Sharp Objects	• Wear cut resistant work gloves when the possibility of lacerations or other injury may be caused by sharp edges or objects • Maintain all hand and power tools in a safe condition • Keep guards in place during use	Wizard gloves or equivalent	
	Handling Heavy Objects	• Observe proper lifting techniques • Obey sensible lifting limits (60 lb. maximum per person manual lifting) • Use mechanical lifting equipment (hand carts, trucks) to move large, awkward loads		
	Slips, Trips, Falls	• Clear walkways, work areas of equipment, tools, vegetation, excavated material, and debris • Mark, identify, or barricade other obstructions		
	Inhalation and Contact with Hazardous Substances • Lead • RF Radiation	• Provide workers proper skin, eye and respiratory protection based on the exposure hazards present • Review hazardous properties of site contaminants with workers before operations begin • Always use safety probe cover when measuring XRF samples • Keep XRF source materials in a secure place for storage • Review radiation hazards with operating personnel	Tyvek coveralls, latex or neoprene boots, nitrile gloves	LEL/O_2, PID, Mini-RAM, Air Sampling Pump
	High/Low Ambient Temperature	• Monitor for Heat/Cold stress in accordance with OHM Health and Safety Procedures # 3-4, 3-5 • Provide fluids to prevent worker dehydration		

EQUIPMENT TO BE USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
	• Daily equipment inspections	• Review JSA with task personnel •

ACTIVITY HAZARD ANALYSIS FOR SOIL REMEDIATION/EXCAVATION
DO 137 Modification #9

Principal Steps	Potential Safety/Health Hazards	Hazard Control Measures	Personal Protective Equipment	Air Monitoring Devices
Excavation of Soil	Underground Utilities	• Identify all underground utilities around the excavation site before work commences • Cease work immediately if unknown utility markers are uncovered		
	Struck By/ Against Heavy Equipment	• Use reflective warning vests when exposed to vehicular traffic • Isolate equipment swing areas • Make eye contact with operators before approaching equipment • Understand and review hand signals	Warning vests, hard hat, safety glasses	
	Sharp Objects	• Wear cut resistant work gloves when the possibility of lacerations or other injury may be caused by sharp edges or objects • Maintain all hand and power tools in a safe condition • Keep guards in place during use	Leather gloves, reinforced palm	
	High Noise Levels	• Use hearing protection when exposed to excessive noise levels (greater than 85 dBA over an 8-hour work period)	Ear plugs	

ACTIVITY HAZARD ANALYSIS FOR SOIL REMEDIATION/EXCAVATION
DO 137 Modification # 9

Principal Steps	***Potential Safety/Health Hazards***	***Hazard Control Measures***	***Personal Protective Equipment***	***Air Monitoring Devices***
Soil Remediation/Excavation	Excavation Wall Collapse	• Construct diversion ditches or dikes to prevent surface water from entering excavation • Provide good drainage of area adjacent to excavation • Collect ground water/rain water from excavation and dispose of properly • Store excavated material at least 2 feet from the edge of the excavation; prevent excessive loading of the excavation face • Provide sufficient stairs, ladders, or ramps when workers enter excavations over 4 feet in depth • Place ladders no more than 25 feet apart laterally • Treat excavations over 4 feet deep as confined spaces • Complete confined space permit entry procedure • Monitor atmosphere for flammable/toxic vapors, and oxygen deficiency • Slope, bench, shore, or sheet excavations over 5 feet deep if worker entry is required • Assign a competent person to inspect, decide soil classification, proper sloping, the correct shoring, or sheeting • Inspect excavations (when personnel entry is required) daily, any time conditions change • Provide at least two means of exit for personnel working in excavations	Hard hat, safety glasses	
	Slips, Trips, Falls	• Clear walkways, work areas of equipment, vegetation, excavated material, tools, and debris • Mark, identify, or barricade other obstructions		
	Handling Heavy Objects	• Observe proper lifting techniques • Obey sensible lifting limits (60 lb. maximum per person manual lifting) • Use mechanical lifting equipment (hand carts, trucks) to move large, awkward loads		

ACTIVITY HAZARD ANALYSIS FOR SOIL REMEDIATION/EXCAVATION
DO 137 Modification # 9

Principal Steps	Potential Safety/Health Hazards	Hazard Control Measures	Personal Protective Equipment	Air Monitoring Devices
	Inhalation and Contact with Hazardous Substances	• Provide workers proper skin, eye and respiratory protection based on the exposure hazards present • Review hazardous properties of site contaminants with workers before operations begin • Dampen soil using light water spray to prevent fugitive dust emissions • Cover stockpiled soil with plastic sheeting to prevent fugitive dust emissions	Tyvek coveralls, nitrile or latex gloves, neoprene or latex boots (See Section 5.0 HASP)	LEL/O_2, PID
	High/Low Ambient Temperature	• Monitor for Heat/Cold stress in accordance with OHM Health and Safety Procedures # 3-4, 3-5 • Provide fluids to prevent worker dehydration		
Backfilling	Slips, Trips, Falls	• Clear walkways, work areas of equipment, vegetation, excavated material, tools, and debris • Mark, identify, or barricade other obstructions		
	Struck By/ Against Heavy Equipment	• Use reflective warning vests worn when exposed to vehicular traffic • Isolate equipment swing areas • Make eye contact with operators before approaching equipment • Understand and review hand signals	Warning vests, hard hat safety glasses	
	Sharp Objects	• Wear cut resistant work gloves when the possibility of lacerations or other injury may be caused by sharp edges or objects • Maintain all hand and power tools in a safe condition • Keep guards in place during use	Leather gloves reinforced palms	

EQUIPMEMT TO BE USED	INSPECTION REQUIREME3NTS	TRAINING REQUIREMENTS
	• Daily heavy equipment inspections •	• 40 Hour OSHA • Review AHA with crew members prior to start-up of the task

ACTIVITY HAZARD ANALYSIS FOR SITE RESTORATION
DO 137 Modification # 4

Principal Steps	Potential Safety/Health Hazards	Hazard Control Measures	Personal Protective Equipment	Air Monitoring Devices
Site Restoration	Struck By/Against Heavy Equipment, Protruding Objects	• Use reflective warning vests when exposed to vehicular traffic • Avoid equipment swing areas • Make eye contact with operators before approaching equipment • Wear hard hats, safety glasses with side shields, or splash/face shields and goggles, and steel-toe safety boots at all times • Understand and review hand signals	Warning vests, Hard hat, Safety glasses	
	Slips, Trips, Falls	• Clear, walkways of equipment, tools, debris, other materials • Mark, identify, or barricade other obstructions		
	High Noise Levels	• Use hearing protection when exposed to excessive noise levels (greater than 85 dBA over an 8-hour work period)	Ear plugs	
	Handling Heavy Objects	• Observe proper lifting techniques • Obey sensible lifting limits (60 lb per person for manual lifting) • Use mechanical lifting equipment (hand carts, trucks) to move large, awkward loads		
	Contact Dermatitis	• Wear PPE to avoid skin contact with contaminated soil, plants, or other skin irritants • Identify and review poisonous plants with workers	Tyvek coveralls, duct tape bottom of coveralls to boots or latex boot covers	
	High/Low Ambient Temperature	• Monitor for Heat/Cold stress in accordance with OHM Health and Safety Procedures # 3-4, 3-5 • Provide fluids to prevent worker dehydration		

EQUIPMENT TO BE USED	INSPECTON REQUIREMENTS	TRAINING REQUIREMENTS
	• Daily equipment documented inspections •	• Review AHA with task personnel

APPENDIX B
FEDERAL FACILITY COMPLIANCE AGREEMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

By Overnight Mail

July 30, 1998

Patricia Chalfant, Esq.
Mail Code 09C1
Office of Counsel, Engineering Field Activity Chesapeake
Washington Navy Yard, Building 212
901 M Street, S.E.
Washington, DC 20374-5018

Re: Former Naval Training Center Bainbridge
Asbestos NESHAP Federal Facility Compliance Agreement

Dear Patricia:

Enclosed is a copy of the fully executed Federal Facility Compliance Agreement for the Bainbridge Naval Training Center. It became effective on July 30, 1998. The time for various activities (e.g., beginning and finishing excavation) run from this date.

I have enclosed the list of survey coordinates for Appendix B. I have not, however, enclosed the two maps for Appendices A and B because they are too large to mail. Ken Booth gave me the maps, and I assume that he has another copy, or can make them. If this is a problem, please call me, and I will try to get the maps reduced and sent in the mail.

Thanks for all your help. If you have any questions, please do not hesitate to call me at 215-566-2664.

Very truly yours,

Frank A. Fritz, III

cc: Bob Greaves (by e-mail)
Bob Kramer (by e-mail)
Racine Leonard (by e-mail)
Bob Greaves (by e-mail)
Bill Smith (by e-mail)
Margaret Cardamone (by e-mail)
Sally Dalzell, EPA FFEO (by e-mail)
Tom Ripp (by e-mail)
Frank Whitehead, Program Manager
Asbestos and Industrial Hygiene Department
Maryland Department of the Environment
2500 Broening Highway
Baltimore, MD 21224

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III

IN THE MATTER OF:	)	
BAINBRIDGE NAVAL TRAINING CENTER, Cecil County, Maryland	)	SECOND AMENDMENT TO THE FEDERAL FACILITY COMPLIANCE AGREEMENT
UNITED STATES NAVY	)	
	)	Docket No. III-FCA-CAA-008

Table of Contents

Without trial or adjudication of any issues of fact or law, the Parties agree as follows:

1 Introduction and Statement of Purpose

1.1 On September 24, 1991, the United States Environmental Protection Agency ("EPA") and the United States Department of the Navy ("Navy") entered into a Federal Facility Compliance Agreement (the "First Agreement") respecting the former Naval Training Center Bainbridge ("Bainbridge" or "Site"), pursuant to Executive Order 12088, October 13, 1978, 43 Fed. Reg. 47707, as amended, and Section 118(a) of the Clean Air Act ("CAA"), 42 U.S.C. § 7418(a). The First Agreement was amended effective November 9, 1992.

1.2 The EPA and the Navy hereby enter into this Second Amendment to the Federal Facility Compliance Agreement (the "Agreement") respecting Bainbridge, pursuant to Executive Order 12088, October 13, 1978, 43 Fed. Reg. 47707, as amended, and Section 118(a) of the CAA, 42 U.S.C. § 7418(a). This Agreement replaces the First Agreement, including the amendment of November 9, 1992, in its entirety.

1.3 The EPA's and Navy's mutual purpose in entering into this Agreement is to establish a standard work practice which, when executed, will ensure compliance with the CAA, Asbestos NESHAP and the Federal Facility Compliance Agreements for this Site, now and in the future.

1.4 This Agreement and, in particular, the Standard Work Practice and Compliance Requirements in Section 4 have been negotiated in consultation with the State of Maryland, acting through the Maryland Department of the Environment ("MDE"). Notice of this Agreement has been given to MDE.

1.5 This Agreement shall apply to and be binding upon EPA and the Navy, its successors and assigns. The Parties shall notify their agents, employees, and/or contractors involved in carrying out work under this Agreement of the Agreement's existence and terms, and shall provide a copy of the Agreement to any such contractor within two days of the contractor's retention. Each party shall be responsible for ensuring that its agents, employees, and/or contractors comply with the terms and conditions of this Agreement. The failure of a party to provide proper direction to its agents, employees, and/or contractors shall not be considered a Force Majeure event or other good cause for extension under Section 6 of the Agreement unless the Parties so agree.

1.6 No change in ownership of the Site shall in any way alter the Navy's responsibilities under this Agreement.

1.7 This Agreement is not and shall not be construed as a permit and in no way affects the requirements for the Navy to obtain all applicable federal, state and/or local permits and authorizations required to perform this Agreement.

2 Definitions

2.1 Except as noted below or otherwise explicitly stated, the definitions provided in the CAA and the Asbestos NESHAP shall control the meaning of terms used in this Agreement.

2.2 "ACWM" shall mean "asbestos-containing waste materials," as defined in 40 C.F.R. § 61.141 (revised July 1, 1997), and subsequent amendments. It shall include transite chips and/or transite demolition debris at the Site.

2.3 "Agreement" shall mean this document, its appendices and all amendments and modifications adopted pursuant to Section 7 of the Agreement. All amendments and modifications shall be integral and enforceable parts of this document.

2.4 "Asbestos NESHAP" shall mean the National Emission Standard for Asbestos, 40 C.F.R. Part 61, Subpart M, as set forth in the Code of Federal Regulations, revised July 1, 1997, and subsequent amendments.

2.5 "Bainbridge" or "Site" shall mean the former Naval Training Center Bainbridge in Port Deposit, Cecil County, Maryland.

2.6 "CAA" shall mean the Clean Air Act, 42 U.S.C.A. §§ 7401-7671q (West 1995 & Supp. 1998), and subsequent amendments.

2.7 "Excavation Area" shall mean an area in which the Navy is required to excavate soil in accordance with Paragraph 4.1.2 of this Agreement.

2.8 "Navy" shall mean the United States Department of the Navy, acting through the Engineering Field Activity Chesapeake. This term shall include the Navy and all its agents, representatives, and/or contractors performing this Agreement.

2.9 "Parcel" shall mean one of fifteen areas into which the Navy has divided the Site for purposes of this Agreement. The fifteen parcels are defined in the maps in Appendix A of this Agreement. Some Parcels contain one or more Excavation Areas.

2.10 "Parties" shall mean the United States Environmental Protection Agency and the United States Department of the Navy.

2.11 "Pickup Area" shall mean the area in which the Navy is required to pick up ACWM from the surface in accordance with Paragraph 4.1.1 of this Agreement. The sole Pickup Area is in Parcel 4 (the First Regiment area, Building 101), and is depicted on the Map in Appendix A.

2.12 "Project Manager" shall mean, for EPA, Racine Leonard Davis or her successor and for the Navy, Kenneth Booth or his successor.

2.13 "Regional Administrator" shall mean the Regional Administrator of Region III of the U.S. Environmental Protection Agency.

2.14 The "Work" shall mean all activities described in Section 4 of this Agreement ("Standard Work Practice and Compliance Requirements") and all other activities needed to properly complete the activities described in Section 4.

3 Findings of Fact and Background

3.1 Despite the Navy's efforts to comply with the First Agreement, as amended, transite demolition debris, an asbestos-containing waste material or ACWM, remains at the Site in areas where the Navy demolished buildings in the past.

3.2 EPA has determined that the Navy's previous level of cleanup has not brought the Site into compliance with the waste disposal requirements of the Asbestos NESHAP, 40 C.F.R. § 61.150(a) and (b), and Paragraphs 4-7, 4-8 and 4-10 of the First Agreement, as amended.

3.3 Since October 1996, EPA, MDE and the Navy have been working diligently to determine an effective means to cleanup the residual ACWM at the Site. To date, the following areas have been investigated and discussed jointly by EPA, MDE and the Navy.

3.4 *Vertical Extent of Residual Transite Debris.* The vertical extent of residual transite was determined from the information gathered from 30 test areas throughout the Site. Each test area covered nine square feet of ground. The test areas were carefully excavated to determine the transite concentration at specific depths. This testing was conducted by the EPA, MDE and the Navy between November 1996 and February 1997. Based on the results of these tests, EPA indicated depths to which the Navy should excavate soil to remove residual ACWM from the Site.

3.5 *Horizontal Extent of Residual Transite Debris.* The horizontal extent of residual transite for an area with a physical boundary (*e.g.*, a paved parking lot, sidewalk, tree line, wetland) was agreed to be the physical boundary. The horizontal extent of residual transite in "unbounded" areas, *i.e.*, areas with no physical boundary, was determined by information gathered in a trenching exercise. The Navy awarded a contract to complete the trenching in March 1997. By sorting material excavated from trenches, representatives from the EPA, MDE and Navy determined that the horizontal extent of excavation for an "unbounded" area was 20 feet from the building foundation, or footprint.

3.6 *Delineation of Areas to be Excavated.* Based on the information gathered above, the Navy awarded a contract in March 1997 to physically delineate the areas to be excavated. The areas were marked by the Navy contractor according to the following constraints:

3.6.1 The areas to be delineated for excavation were limited to those designated on computer-aided-design ("CAD") maps provided by the Navy. These areas were known to contain transite.

3.6.2 The contractor was to roughly mark the areas with survey stakes, markers or similar devices in such a manner that they are clearly visible for the excavation effort. Markers were to be able to withstand the effect of weather for a 2 year period.

3.6.3 The markers were to be no closer to a tree or tree line than the drip line.

3.6.4 For irregular boundaries (*e.g.*, tree line), markers were to be placed no closer than 100 feet apart to define the line of excavation.

3.6.5 The markers were to be no closer to wetlands than 25 feet.

3.6.6 Physical boundaries, such as curbs, roads, pathways, walls or driveways, were to delineate areas of excavation. These physical boundaries were to be marked in the same way as other boundaries.

3.6.7 When an area was determined to be "unbounded," with no other physical boundaries in the vicinity, the markers were to be placed 20 feet away from the building footprint.

3.7 The contractor completed the delineation effort in May 1997. EPA reviewed the delineation and concurred with the final result in May 1997. From the data gathered in 3.4, 3.5, and 3.6, the estimated volume of excavated material was calculated.

3.8 On June 19, 1997, the Navy, through its contractor, The Environmental Company, Inc., presented disposal options and costs to EPA in a report entitled "Draft Analysis of Alternatives for the Disposal of Residual Transite Waste in Soil, Former Naval Training Center Bainbridge, Port Deposit, Maryland, June, 1997" (the "Disposal Alternatives Report").

4 Standard Work Practice and Compliance Requirements

4.1 *Summary of the Work*

4.1.1 The Navy shall pick up residual ACWM that is visible to the eye on the surface of the ground at Building 101 in Parcel 4. EPA inspectors or authorized representatives shall confirm the pickup of ACWM from the surface in accordance with Paragraph 4.2.6.

4.1.2 The Navy shall excavate ACWM and soil as specified in Table 4-1. The Parcels noted in Table 4-1 are defined by the maps in Appendix A. Within each Parcel are one or more Excavation Areas, which the Navy shall excavate to the depths shown in Table 4-1. The horizontal boundaries of each Excavation Area are defined by the map in Appendix A and the coordinates in Appendix B.

Table 4-1

Parcels for which cleanup is required

Parcel	Required Work	Excavation Depth
Parcel 5; second regiment area	excavation	7"

Table 4-1 Parcels for which cleanup is required		
Parcel	**Required Work**	**Excavation Depth**
Parcel 6; barracks	excavation	6"
Parcel 7; warehouse area	excavation	7"
Parcel 8; fourth regiment area	excavation	3"
Parcel 9; administration area	excavation	3"
Parcel 12; hospital area	excavation	6"
Parcel 13; third regiment area	excavation	3"
Parcel 15; fire training area (bldg 716) to be treated like parcel 9	excavation for fire training area (Building 716) only	3"

4.1.3 No work shall be required under this Agreement in the following parcels, defined in Appendix A.

Table 4-2 Parcels for which no cleanup is required		
Parcel	**Required Work**	
Parcel 1; Tomes School site with no demolition	none	
Parcel 2; landfill site with no demolition	none	
Parcel 3; recreation, administration area	none	
Parcel 10; wooden structures, no transite	none	
Parcel 11; sewage treatment plant, bricks and cement, no transite	none	
Parcel 14; Manor Heights, no transite found during site walk	none	

4.1.4 The Navy shall dispose of excavated soil and ACWM from the Site in an off-site landfill, as described in Alternative 3 of the Draft Analysis of Alternatives for the Disposal of Residual Transite Waste in Soil, Former Naval Training Center Bainbridge, Port Deposit, Maryland, June, 1997 (the "Disposal Alternatives Report"). Any such landfill must meet the requirements of 40 C.F.R. § 61.154 (revised July 1, 1997), and subsequent amendments and must have all landfill permits required by applicable federal, state and/or local law.

4.1.5 The Navy shall commence excavation of soil and surface pickup of ACWM no later than **10 months from the effective date of this Agreement.**

4.1.6 The Navy shall complete excavation of soil and surface pickup of ACWM, and dispose of all excavated soil and ACWM in an off-site landfill, no later than **24 months from the effective date of this Agreement.**

4.1.7 The Navy shall require at least one on-site supervisor to be present at the Site at all times during the excavation of soil containing ACWM, surface pickup of ACWM and/or disposal of excavated soil and ACWM required by this Agreement.

4.1.8 The Navy shall require that the on-site supervisor and Navy's inspectors have the training described in 40 C.F.R. § 61.145(c)(8). The Navy shall also require that the on-site supervisor has personally received contractor/supervisor training through an EPA-approved course pursuant to Section 206 of the Asbestos Hazard Emergency Response Act of 1986, 15 U.S.C. § 2646, concerning the supervision of demolition, renovation and disposal activities involving asbestos.

4.1.9 The on-site supervisor shall be responsible for the following duties and responsibilities:

4.1.9.1 To maintain all training certificates required under this Agreement and applicable federal, state and/or local laws and regulations;

4.1.9.2 To ensure that this Agreement is being complied with at all times;

4.1.9.3 To provide guidance and instruction to any individual at the Site involved in excavation of soil containing ACWM, surface pickup of ACWM or disposal of excavated soil and ACWM.

4.1.9.4 To function as the primary Site contact for EPA and state/local asbestos inspectors and to act as a liaison between these inspectors and individuals employed on Site;

4.1.9.5 To immediately correct any violations of this Agreement discovered and, if an immediate remedy is not possible, to stop all ACWM handling and disposal activities until the violations are corrected.

4.1.9.6 To maintain at the Site a copy of this Agreement, the Asbestos NESHAP and other applicable federal, state, and local asbestos regulations, and any license or permit required by state or local law; and

4.1.9.7 To supervise all aspects of the Work, or portion of the Work, concerning excavation of soil containing ACWM, surface pickup of ACWM or disposal of excavated soil and ACWM.

4.2 *Steps to Accomplish the Work*

4.2.1 Draft Statement of Work. To accomplish the Work, the Navy shall prepare a draft Statement of Work (SOW). The SOW shall be consistent with the terms of this Agreement. The draft SOW shall be submitted to EPA, with a copy to MDE, on or before November 1, 1998. The SOW shall include, at a minimum, the following:

4.2.1.1 Schedules for completing the Work required by this Agreement. At a minimum, the schedules shall require completion of the Work in accordance with the schedules set forth in Paragraphs 4.1.5 through 4.1.6.

4.2.1.2 Plans and Specifications for Excavation and Surface Pickup. Detailed procedures for surface pickup and excavation, in accordance with Paragraphs 4.1.1 and 4.1.2, shall be in the SOW.

4.2.1.3 Requirements for Disposal of All ACWM and Excavated Soil. The SOW shall require that all excavated soil and ACWM be disposed of in an off-site landfill in accordance with Paragraph 4.1.4. The SOW shall also require that any landfill used for disposal of excavated soil and ACWM meet the requirements of 40 C.F.R. § 61.154 (revised July 1, 1997), and subsequent amendments.

4.2.1.4 Unanticipated Discoveries. The SOW shall require that, if, in the process of performing the Work required by this Agreement, the Navy, EPA or MDE discovers a site of bulk disposal of demolition debris, and the Navy, EPA or MDE determines that the debris contains ACWM, the Navy shall dispose of the ACWM in accordance with all applicable federal, state and/or local law, including the Asbestos NESHAP. Within 30 days of such a discovery, the Navy shall submit to EPA and MDE a proposed work plan and schedule for disposing of the ACWM. When EPA, in consultation with MDE, approves the work plan and schedule, the Navy shall dispose of the ACWM in accordance with the approved work plan and schedule.

4.2.1.5 Sediment and Erosion Control Measures. The Navy shall submit to the State of Maryland an application for approval of a Sediment and Erosion Control plan for the Site and, at the same time, submit a courtesy copy of

the application to EPA. Upon approval by Maryland, the Sediment and Erosion Control Plan shall become a part of the SOW.

4.2.1.6 A Construction Quality Assurance Plan. The Navy shall submit a Construction Quality Assurance Plan.

4.2.1.7 A Health and Safety Plan. The Navy shall submit a Health and Safety Plan consistent with the latest version of the U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1.

4.2.2 Review of and Changes to the Draft SOW. EPA, in consultation with MDE, shall exert best efforts to review the draft SOW and approve, reject or suggest changes to it within 30 days of receipt. If EPA rejects or suggests changes to the draft, the Navy shall make changes and resubmit the draft within 15 days. For good cause, EPA may extend the 15 day period. If approved, the Navy shall implement the SOW in the form EPA approves it, including any modifications and/or conditions required by EPA.

4.2.3 Contracts for Performing the SOW. The Navy shall ensure that any contract for performing any part of the SOW is consistent with the terms of this Agreement.

4.2.4 Oversight. The Navy shall ensure that the work force engaged by the Navy to execute the SOW shall do the Work in accordance with the approved SOW and this Agreement. The Navy shall use due care in overseeing the performance of the work force engaged in the excavation, surface pickup and disposal operations.

4.2.5 Verification and Certification of Excavation Depths and Boundaries.

4.2.5.1 The Navy shall require one or more inspector(s) ("Navy's inspector(s)") to oversee the excavation specified by Paragraph 4.1.2 of this Agreement.

4.2.5.2 Prior to excavation, the Navy's inspector(s) shall drive Depth Measuring Stakes ("DMS") into the ground in each Excavation Area. The Navy's inspectors shall drive approximately two stakes per acre of Excavation Area; however, at least four stakes shall be driven in each Excavation Area. The DMS shall be distributed evenly within each Excavation Area.

4.2.5.3 Each DMS shall be marked with two lines: one shall denote the ground level and the other shall denote the required excavation depth for the Excavation Area in which it will be driven. The ground level line shall be located at least 18 inches from the bottom of the stake. Each stake shall be driven into the earth to the ground level line. All future measurements of depth shall be taken from ground level line.

4.2.5.4 Immediately after driving all the DMS into a particular Excavation Area, the Navy's inspector(s) shall record images of the Excavation Area on

videotape, including a pan over the entire area and images of the boundary-marking stakes and the depth measuring stakes. While shooting the videotape, the Navy's inspector(s) shall note in a written log the number of the Excavation Area depicted, the position from which the images were taken (e.g., "midway along the southern boundary line") and the direction in which the camera lens was facing (e.g., "looking north").

4.2.5.5 During excavation of each Excavation Area the Navy's inspector(s) shall be on site and visually verify that each Excavation Area has been fully and properly excavated to the boundaries required by Paragraph 4.1.2 of this Agreement.

4.2.5.6 Immediately following completion of excavation in each Excavation Area, the Navy's inspector(s) shall measure the distance between the soil surface and the ground level line on each DMS. Using these measurements, the Navy's inspector(s) shall determine whether the Excavation Area has been excavated to the depth required by Paragraph 4.1.2 of this Agreement. If the Navy's inspector determines that the required excavation depth has not been reached, the Navy shall excavate again, and the Navy's inspector(s) shall measure again. If the Navy's inspector(s) determines that the required excavation depth has been reached in a particular Excavation Area, the Navy's inspector(s) shall record images of the Excavation Area on videotape showing that the required excavation depth has been reached, including a pan over the entire area and images of the boundary-marking stakes and each DMS. The images shall be taken, to the greatest degree possible, from the same positions and facing in the same directions, as the video images recorded immediately after driving the DMS, as described in Paragraph 4.2.5.4, above. While shooting the videotape, the Navy's inspector(s) shall note in a written log the number of the Excavation Area depicted, the position from which the images were taken (e.g., "midway along the southern boundary line") and the direction in which the camera lens was facing (e.g., "looking north").

4.2.5.7 The Navy's inspectors shall thereafter promptly complete a written certification for each Excavation Area. The certification shall be in the form set out in Appendix C to this Agreement.

4.2.5.8 EPA shall make reasonable efforts to respond to Navy requests for on-site presence by EPA inspectors or other authorized representatives, taking into account the nature of the work being performed at the Site and limitations on agency resources.

4.2.5.8.1 An EPA inspector, Project Manager or authorized representative shall be available to be on-Site approximately every two weeks to inspect completed Excavation Areas and the Navy's

excavation logs and videotapes. In a given month, the frequency of these visits may be adjusted to be less frequent due to the lack of completed areas for EPA to inspect.

4.2.5.8.2 To help plan and schedule EPA inspections in a given month, the Navy shall, at least 10 days before the first of the month, submit to EPA a notice which identifies the Excavation Areas that the Navy anticipates will be completed and ready for inspection. The EPA inspector, Project Manager or authorized representative will make arrangements with the Navy's Project Manager to visit the Site and inspect the Excavation Areas identified in this notice. The Navy Project Manager or authorized representative will provide the EPA Project Manager with confirmation of the need for a site visit at least forty-eight hours prior to the visit.

4.2.5.8.3 If an EPA inspector is satisfied that excavation in a particular Excavation Area has been completed in accordance with Paragraph 4.1.2, the EPA inspector shall promptly concur in writing with the Navy's certification of excavation, prepared in accordance with Paragraph 4.2.5.7. The form of the certification is set forth in Appendix C of this Agreement.

4.2.5.8.4 Only an EPA employee may concur. If an authorized representative of EPA, who is not an EPA employee, performs the inspection, he or she shall submit the certifications to EPA's Project Manager. If, after inquiring of the authorized representative, EPA's Project Manager is satisfied that excavation has been completed in accordance with Paragraph 4.1.2, he or she shall promptly concur in writing with the Navy's certification of excavation and return a signed copy to the Navy. The EPA shall exert best efforts to have the Project Manager concur within two working days (i.e., two week days, excluding federal holidays).

4.2.5.9 The Navy shall forward quarterly reports to the EPA and MDE by the fifteenth of January, April, July, and October of each year which shall contain readable copies of all certification statements and videotapes for the areas in which excavation has been completed in the previous quarter.

4.2.6 Verification and Certification of Surface Pickup. An inspector employed by the Navy and an EPA inspector, Project Manager or authorized representative shall accompany worker(s) as they pick up ACWM from the surface of the ground at Building 101, First Regiment Area, in Parcel 4. The Navy's inspector and the EPA's inspector, Project Manager or authorized representative shall ensure that ACWM visible to the eye has been removed from the surface of the ground, as required by Paragraph 4.1.1 of this Agreement. After the Navy's inspector is satisfied that surface pickup has been completed in accordance with Paragraph 4.1.1, he or she

shall promptly complete a written certification in the form set out in Appendix D. The certification shall include a signed statement certifying that ACWM has been removed from the surface in accordance with Paragraph 4.1.1 of this Agreement. If an EPA employee (e.g., inspector or Project Manager) performs the inspection and is satisfied that ACWM has been removed from the surface in accordance with Paragraph 4.1.1, he or she shall promptly concur in writing with the Navy's certification. Only an EPA employee may concur. If an authorized representative of EPA, who is not an EPA employee, performs the inspection, he or she shall submit the certification to EPA's Project Manager. If, after inquiring of EPA's authorized representative, EPA's Project Manager is satisfied that surface pickup has been completed in accordance with Paragraph 4.1.1, he or she shall promptly concur in writing with the Navy's certification and return a signed copy to the Navy. The EPA shall exert best efforts to have the Project Manager concur within two working days (i.e., two week days, excluding federal holidays).

4.2.7 Duration of Surface Pickup and Notice of Pickup to EPA. The Navy shall complete the surface pickup required by Paragraph 4.1.1, above, within a period of three (3) consecutive workdays that is mutually agreeable to EPA and the Navy. The Navy shall provide EPA with at least fourteen (14) days advance written notice of the proposed surface pickup period.

5 Funding

5.1 It is the expectation of the EPA and the Navy that all obligations of the Navy arising under this Agreement will be fully funded. If the Navy determines that additional funds are needed to achieve compliance, the Navy shall seek through the Department of Defense budgetary process all necessary funds by the most expeditious means possible and, if necessary, shall request new authorizations from Congress in order to achieve the most expeditious schedule of compliance in accordance with Section 1-4 and 1-5 of Executive Order 12088. Section 1-5 of Executive Order 12088 states that "[t]he head of each Executive agency shall ensure that sufficient funds for compliance with applicable pollution controls standards are requested in the agency budget." Failure to obtain adequate funds or appropriations from Congress does not, in any way, release the Navy from its obligation to comply with this Agreement.

5.2 Nothing in this Agreement shall be construed to require the Navy to obligate funds in any fiscal year in contravention of the Anti-Deficiency Act, 31 U.S.C. § 1341.

6 Force Majeure

6.1 If any event occurs which causes delay in the achievement of the requirements of this Agreement, the Navy shall have the burden of proving that the delay was caused by circumstances beyond the reasonable control of the Navy which could not have been overcome by due diligence (a "force majeure event"). Within five (5) days after the Navy becomes aware of a delay or an anticipated delay, the Navy shall orally notify EPA and MDE of the delay or anticipated delay, and shall, within ten (10) days of oral notification, notify EPA and MDE in writing of the cause

and anticipated length of the delay, the measures taken and/or to be taken to prevent or minimize the delay, and the timetable by which the Navy intends to implement these measures.

6.2 If the Parties agree that the delay or anticipated delay is a force majeure event, the time for performance of the affected task shall be extended, in accordance with Section 7 ("Amendments and Modifications"), for a period equal to the delay resulting from such circumstances.

6.3 If the Parties cannot agree that the delay or anticipated delay is a force majeure event or cannot agree on the period for extending performance, the dispute resolution procedures set forth in Section 13 of this Agreement shall apply. The Navy shall adopt all reasonable measures to avoid or minimize delay. Failure of the Navy to comply with the notice requirements of Paragraph 6.1 shall constitute a waiver of any claim of force majeure for such delay or anticipated delay.

7 Amendments and Modifications

7.1 This Agreement may be amended by mutual agreement of EPA and the Navy. Such amendments shall be in writing and shall have as their effective date the date on which such amendments are signed by EPA.

8 Reporting Requirements

8.1 If existing funds are insufficient to implement this Agreement and adequate funds are not appropriated from Congress as requested by the Navy to achieve compliance in accordance with Section 4 ("Standard Work Practice and Compliance Requirements"), the Navy shall notify EPA and MDE of such fact in accordance with Section 6 ("Force Majeure") of this Agreement.

8.2 The Navy shall notify EPA and MDE of the identities and assigned tasks of all contractors involved in implementing this Agreement.

8.3 Immediately following the effective date of this Agreement, the Navy shall submit to EPA and MDE quarterly progress reports by the fifteenth of January, April, July, and October of each year, until the Standard Work Practice and Compliance Requirements of Section 4 have been completed. The reports shall include the quarterly reports required by Paragraph 4.2.5.9. The progress reports shall certify whether the Navy is in compliance or noncompliance with the requirements of Section 4. The reports shall also contain the following information related to this Agreement: description of any anticipated future noncompliance along with a description of measures being implemented to avoid or lessen the noncompliance; a record of changes in personnel involved in the implementation of this Agreement made during the reporting period; and a schedule and summary of all projected activities under this Agreement for the next reporting period.

8.4 Any document submitted by the Navy pursuant to this Agreement which discusses, describes, demonstrates, supports any findings or makes any representation concerning the Navy's compliance or noncompliance with any requirement of this Agreement shall be certified by the Commanding Officer, EFA Chesapeake or the person who assumes his or her responsibilities in a new organization. Such documents include quarterly reports under Paragraphs 4.2.5.9, reports under Section 8 and notifications of force majeure events under Paragraph 6.1. The certification required above shall be in the following form:

> I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
>
> Signature: _____
>
> Name (print): _____
>
> Title: _____

8.5 All documents required to be submitted to EPA under this Agreement shall be submitted to:

Racine Leonard Davis (3WC32)
Waste and Chemicals Management Division
U.S. EPA, Region III
1650 Arch Street
Philadelphia, PA 19103

All documents required to be submitted to MDE under this Agreement shall be submitted to:

Frank Whitehead, Program Manager
Asbestos and Industrial Hygiene Department
Maryland Department of the Environment
2500 Broening Highway
Baltimore, MD 21224

All documents required to be submitted to the Navy under this Agreement shall be submitted to:

Edward Olenginski
Head, Environmental Engineering Branch
Code 182
Department of the Navy
Engineering Field Activity Chesapeake
Washington Navy Yard, Bldg. 212
901 M Street, S.E.
Washington, DC 20374-5018

EPA, MDE or the Navy may change the designated contact person or address by giving prior written notice of the change to the other contact persons.

8.6 Written statements of dispute and documents required to be submitted under this Agreement shall be postmarked on or before the last day of the time period designated in this Agreement.

9 Preservation of Records

9.1 The Navy shall preserve, during the pendency of this Agreement and for a minimum of five (5) years after its termination, all records in its possession, custody or control which relate to the actions carried out pursuant to this Agreement. After the five (5) year retention period, the Navy shall notify the EPA and MDE at least sixty (60) days prior to the proposed destruction of any such records. In the event that EPA or MDE does not notify the Navy within such sixty (60) day period that it wishes to obtain a copy of such records, the Navy may destroy such records to the extent permitted by the Federal Records Act of 1950 and the Federal Records Disposal Act, codified at 44 U.S.C.A. §§ 2901-09, 3101-07, 3301-24 (West 1991 & Supp. 1997), and subsequent amendments.

10 Data and Document Availability

10.1 Upon request by EPA or MDE, the Navy shall promptly make available records, documents, data, or copies thereof, which are required to be kept under this Agreement or generated through implementation of this Agreement. Nothing herein shall be construed as requiring release of any material that would be privileged from disclosure pursuant to 40 C.F.R. Part 2 or any other federal law or regulation. Nothing in this Section shall constitute a waiver of, or agreement to provide documents protected by, the attorney-client privilege, the work product doctrine, or any other privilege recognized by federal statute or case law.

10.2 Whenever the Navy claims that information requested by EPA (or MDE) under this Agreement is privileged information, the Navy shall identify to EPA (or MDE), in writing, the title and summary of such document(s), and provide to EPA (or MDE) a citation to, and if practicable a copy of, the legal authority which pertains to the claimed privilege.

10.3 Disputes arising from the withholding of privileged information shall be resolved pursuant to Section 13 of this Agreement ("Resolution of Disputes"). The Parties shall not destroy any documents withheld under a claimed privilege or doctrine pending any dispute between the Parties regarding the applicability of such privilege and for sixty (60) days after resolution of such dispute.

10.4 At the request of EPA, the Navy shall allow split or duplicate samples to be taken by EPA or its authorized representative of any samples collected by the Navy pursuant to this Agreement. Similarly, at the request of the Navy, EPA shall allow split or duplicate samples to be taken by the Navy of any samples collected by EPA pursuant to this Agreement.

11 Access

11.1 Without limitation on any authority conferred on EPA by statute or regulation, EPA, MDE, or their authorized representatives, upon presentation of EPA or MDE credentials, shall have the authority to enter the Site and Navy offices at all reasonable times for purposes consistent with the implementation and enforcement of this Agreement. Such authority shall include, but not be limited to: inspecting records, operating logs or contracts related to performance of this Agreement; reviewing the progress of the Navy in carrying out the terms of this Agreement; conducting such tests as EPA and/or MDE deems necessary; and verifying the information submitted to EPA and/or MDE.

11.2 Any representative of EPA with access to the Site or Navy offices pursuant to this Section shall comply with all laws and conform to all applicable federal health and safety regulations.

12 Enforceability

12.1 The Navy recognizes its obligation to comply with this Agreement, the CAA and regulations promulgated thereunder (including the Asbestos NESHAP) as required by Section 118(a) of the CAA, 42 U.S.C. § 7418 (a). The Navy further recognizes its obligation to comply with other applicable provisions of federal, state, and local pollution control standards (including applicable Maryland statutes and regulations governing asbestos disposal), and with Executive Order 12088, Section 1-3 which authorizes EPA to monitor federal compliance with applicable pollution control standards.

12.2 EPA may decide that the Navy's failure to comply with the requirements of this Agreement, including failure to complete any of the Standard Work Practice and Compliance Requirements within the deadline specified, should subject the Navy to civil administrative enforcement under Section 113 of the CAA, 42 U.S.C. § 7413, including the assessment of civil administrative penalties of up to $27,500 (adjusted for inflation) per day of violation. In the event that EPA initiates action to assess any penalties, the Navy retains any and all administrative relief afforded by Section 113 of the CAA and EPA's implementing regulations, including the right to contest the applicability of Section 113 to the violation alleged.

13 Resolution of Disputes

13.1 Except as specifically set forth elsewhere in this Agreement, if a dispute arises under this Agreement, the procedures of this Section shall apply. In addition, during the pendency of any dispute, the Navy agrees that it shall continue to implement those portions of this Agreement which are not in dispute and which EPA determines can be reasonably implemented pending final resolution of the issue(s) in dispute. If EPA determines in writing that all or part of those portions of the work which are affected by the dispute should stop during the pendency of the dispute, the Navy shall discontinue implementing those portions of the work.

13.2 The pendency of any dispute under this Section shall not affect the Navy's responsibility to perform the work required by this Agreement in a timely manner, except that the time period for completion of work affected by such dispute may, at EPA's discretion, be extended for a period of time not to exceed the actual time taken to resolve any good faith dispute in accordance with the procedures specified herein. All elements of the work required by this Agreement which are not affected by the dispute shall continue and be completed in accordance with the applicable schedule. The determination of elements of work, submittals or actions affected by the dispute shall be determined by EPA and shall not be subject to dispute under this Section. As an exception to the general resolution process outlined below, EPA shall resolve any dispute within sixty (60) days that requires the Navy to suspend or stop work by an expedited elevation to Division Director level at thirty (30) days and the Regional Administrator/Commanding Officer level at forty-five (45) days.

13.3 The Parties to this Agreement shall make reasonable efforts to informally resolve disputes at the Project Manager or immediate supervisor level. With respect to EPA, "Project Manager" means Racine Leonard Davis, or any duly identified successor. With respect to the Navy, "Project Manager" means Kenneth Booth, or any duly identified successor. If resolution cannot be achieved informally, the procedures of this Section shall be implemented to resolve a dispute.

13.4 Within fourteen (14) days after any action which leads to or generates a dispute, the Navy shall submit to EPA a written statement of dispute setting forth the nature of the dispute, the Navy's position with respect to the dispute and the information the Navy is relying upon to support its position. If the Navy does not provide such written statement to EPA within this fourteen (14) day period, the Navy shall be deemed to have agreed with the action taken by EPA which led to or generated the dispute.

13.5 Where EPA issues a written notice of position, the Navy may provide EPA with a written statement of dispute setting forth the nature of the dispute, its position with respect to the dispute and the information it is relying upon to support its position. If the Navy does not provide such a written statement of dispute within fourteen (14) days of receipt of EPA's written notice of position, the Navy shall be deemed to have agreed with EPA's position.

13.6 Upon receipt of the written statement of dispute, the Parties shall engage in dispute resolution among the Project Managers and/or their immediate supervisors. The Parties shall have fourteen (14) days from the receipt by EPA of the written statement of dispute to resolve the

dispute. During this period, the Project Managers shall meet or confer as many times as necessary to discuss and attempt resolution of the dispute. If agreement cannot be reached on any issue within this fourteen (14) day period, the Navy may, within ten (10) days after the conclusion of the fourteen (14) days dispute resolution period, submit a written notice to EPA elevating the dispute to the Dispute Resolution Committee ("DRC") for resolution. If the Navy does not elevate the dispute to the DRC within this ten (10) day period, the Navy shall be deemed to have agreed with EPA's position with respect to the dispute.

13.7 The DRC will serve as a forum for resolution of disputes for which agreement has not been reached pursuant to Paragraphs 13.4, 13.5, or 13.6 of this Section. The Parties shall each designate one primary and one alternate member to serve on the DRC. The individuals designated to serve on the DRC shall be employed in the position specified in Paragraph 13.9 or be specifically delegated the authority to participate on the DRC for the purposes of dispute resolution under this Agreement. Following elevation of a dispute to the DRC as set forth in Paragraph 13.6, the DRC shall have thirty (30) days to unanimously resolve the dispute. If unanimous resolution is not achieved within this thirty (30) day period, the Navy may, within ten (10) days after the conclusion of the thirty (30) day dispute resolution period, submit a written Notice of Dispute to the Regional Administrator for resolution of the dispute. In the event that the dispute is not elevated to the Regional Administrator of EPA within the designated ten (10) day period, the Navy shall be deemed to have agreed with the EPA DRC representative's position with respect to the dispute. The Secretary of the Navy may, within twenty (20) days following the Navy's receipt of the Regional Administrator's resolution of the dispute, submit a written Notice of Dispute to the Administrator of U.S. EPA for final resolution of the dispute. In the event that the dispute is not elevated to the Administrator of U.S. EPA within the designated twenty (20) day period, the Navy shall be deemed to have agreed with the Regional Administrator's position with respect to the dispute.

13.8 Upon elevation of a dispute to the Administrator of U.S. EPA pursuant to Paragraph 13.7, the Administrator will review and resolve such dispute as expeditiously as possible. The Administrator's dispute resolution authority under this Section may not be delegated, and upon request by the Navy, the Administrator may consult with the Secretary of the Navy before rendering a final decision. Upon resolution, the Administrator shall provide the Navy with a written final decision setting forth the resolution of the dispute. In the event that a final decision in dispute resolution has the effect of impacting the "paramount interest" of the United States, the Navy may seek relief by obtaining an exemption from the Office of the President pursuant to Sections 112(i)(4) and 118(b) of the CAA, 42 U.S.C. §§ 7412(i)(4) and 7418(b).

13.9 The EPA representative on the DRC is the Director, Waste and Chemicals Management Division of EPA, Region III. The Navy's designated member is:

Commanding Officer
Engineering Field Activity Chesapeake
Washington Navy Yard, Bldg. 212
901 M Street, S.E.
Washington, DC 20374-5018

Delegation of the authority from a party's primary representative on the DRC to the alternate shall be provided to all other Parties and further delegation is permitted only by Amendment of this Agreement pursuant to Section 7 ("Amendments and Modifications").

13.10 Within twenty-one (21) days of resolution of a dispute pursuant to the procedures specified in this Section, the Navy shall incorporate the resolution and final determination into the appropriate statement of work, plan, schedule or procedures and proceed to implement this Agreement according to the amended statement of work, plan, schedule or procedures.

13.11 Resolution of a dispute pursuant to this Section of the Agreement constitutes a final resolution of any dispute arising under this Agreement. The Parties shall abide by all terms and conditions of any final resolution of dispute obtained pursuant to this Section of the Agreement.

13.12 At the request of the Navy and EPA, the MDE may be invited to participate in the dispute resolution process, upon such terms and conditions as are approved by both Parties. EPA or the Navy may consult with MDE representatives at any stage in the dispute resolution process.

14 *Sanctions*

14.1 In the event that the Navy fails to bring itself into full compliance with the requirements specified in this Agreement within the time periods and in the manner specified herein, subject to Section 5 ("Funding"), Section 6 ("Force Majeure") and Section 13 ("Resolution of Disputes"), and upon written direction from EPA, the Navy shall immediately cease and desist from engaging in noncompliant activities unless and until the Navy brings itself into compliance; or Congress grants a petition for specific legislative relief. In the event that the Navy fails to bring itself into full compliance with this Agreement, EPA reserves the right to pursue any remedies that it may have under CAA or any other law for such failure to achieve compliance.

15 Reservation of Rights

15.1 Except as otherwise set forth in this Agreement, the Parties reserve all other rights with respect to each other and any person or organization not a party to this Agreement. In particular, the Parties reserve any and all rights and defenses they may have under the CAA and the Asbestos NESHAP, or any other federal or state law or regulation, where those rights and defenses are not inconsistent with the terms of this Agreement.

15.2 Nothing in this Agreement is intended to or should be construed as affecting the rights of any person other than as specifically provided herein with respect to the Parties.

16 Termination and Satisfaction

16.1 At the conclusion of all activities required by Section 4 of this Agreement ("Standard Work Practice and Compliance Requirements"), the Navy shall send a brief written certification to EPA, signed by a responsible officer, certifying that all the requirements of Section 4 have been completed, and that the Navy is currently in compliance with the other Sections of this Agreement. EPA shall either issue the letter described in the following paragraph, or submit a letter to the Navy describing the requirements of Section 4 that the Navy has not properly completed, or the Sections of this Agreement with which the Navy is not in compliance. EPA shall exert its best efforts to do so within 60 days of receipt of the Navy's certification. If the EPA identifies in writing requirements that have not been properly completed or complied with, the Navy shall properly complete or comply with the requirements described in the EPA's letter, and submit a new certification in accordance with this paragraph.

16.2 The provisions of this Agreement shall be deemed satisfied upon the Navy's receipt of written notice from EPA that the Navy has demonstrated, to the satisfaction of EPA, that the Navy is in compliance with the terms of this Agreement. This notice shall not, however, terminate the Navy's obligation to comply with any continuing obligations hereunder including, but not limited to, Sections 9 ("Preservation of Records") and 10 ("Data and Document Availability").

17 Effective Date

17.1 The effective date of this Agreement shall be the date on which it is signed by the Regional Administrator, U.S. Environmental Protection Agency, Region III. EPA agrees to notify the Navy upon signature of this Agreement.

23 July 1998

Date

J. Sabbatini
Captain, CEC, USN
Commanding Officer
Engineering Field Activity Chesapeake

JUL 30 1998

Date

W. Michael McCabe
Regional Administrator
U.S. EPA, Region III

Appendix A

Bainbridge Naval Training Center Excavation Map, June 1998, prepared by The Environmental Company, Inc.

Appendix B

Bainbridge Naval Training Center Stake Location Reference Map and Survey Coordinates, June 1998, prepared by The Environmental Company, Inc.

Appendix C

Naval Training Center Bainbridge, Port Deposit, Maryland
Federal Facility Compliance Agreement, EPA Docket No. III-FCA-CAA-008, as amended

Certification of Excavation of Asbestos-Containing Waste Material

Navy's Inspector's Name (print): _____

Date of Inspection: _____

Excavation Area No. (e.g. "5-2"): _____

Approx. Area Excavated (acres): _____

Req'd Excavation Depth (inches): _____

No. and Vol. of Truckloads (e.g. "10 x 10 cubic yards"): _____

No. of Stakes in Excavation Area: _____

I inspected the above-noted Excavation Area at the Naval Training Center Bainbridge in Port Deposit, Maryland. Based upon my inspection, I certify that the Navy has successfully completed the requirements of Section 4.1.2 of the Federal Facility Compliance Agreement, Naval Training Center Bainbridge, EPA Docket No. III-FCA-CAA-008, as amended (the "Agreement") for this Excavation Area.

I certify under penalty of law that this document was prepared by me and the information presented is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Navy's Inspector's Signature: _____

Signature Date: _____

EPA Concurrence
Only EPA employees may sign

I concur with the findings in this certification, based on my own visual inspection of the Excavation Area, or based on the report of an authorized representative of EPA, who personally inspected the Excavation Area.

EPA Inspector/Project Manager Name (print): _____

Signature: _____ Date: _____

Appendix D

Naval Training Center Bainbridge, Port Deposit, Maryland
Federal Facility Compliance Agreement, EPA Docket No. III-FCA-CAA-008, as amended

Certification of Surface Pickup of Asbestos-Containing Waste Material At Building 101, First Regiment Area, Parcel 4

Navy's Inspector's Name (print): _____

Date of Inspection: _____

I inspected the surface of the ground at Building 101, First Regiment Area, Parcel 4 at the Naval Training Center Bainbridge in Port Deposit, Maryland. Based upon my inspection, I certify that the Navy has successfully completed the requirements of Section 4.1.1 of the Federal Facility Compliance Agreement, Naval Training Center Bainbridge, EPA Docket No. III-FCA-CAA-008, as amended (the "Agreement") for this Pickup Area.

I certify under penalty of law that this document was prepared by me and the information presented is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Navy's Inspector's Signature: _____

Signature Date: _____

EPA Concurrence
Only EPA employees may sign

I concur with the findings in this certification, based on my own visual inspection of the Pickup Area, or based on the report of an authorized representative of EPA, who personally inspected the Pickup Area.

EPA Inspector/Project Manager Name (print): _____

Signature: _____ Date: _____

Appendix E

Example text of certification that Navy sends to EPA at end of the Work

Naval Training Center Bainbridge, Port Deposit, Maryland

Federal Facility Compliance Agreement, EPA Docket No. III-FCA-CAA-008, as amended

Attached is the final quarterly report required by Paragraph 8.4 of the Federal Facility Compliance Agreement, Naval Training Center Bainbridge, EPA Docket No. III-FCA-CAA-008, as amended.

I, the undersigned, hereby certify that the United States Department of the Navy ("Navy") has completed all the requirements of Section 4 ("Standard Work Practice and Compliance Requirements") of the Agreement. I further certify that the Navy is currently in compliance with the other Sections of the Agreement.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____

Name (print): _____

Title: _____

Appendix F

Example text of EPA's notice to Navy regarding termination of the Agreement

Naval Training Center Bainbridge, Port Deposit, Maryland
Federal Facility Compliance Agreement, EPA Docket No. III-FCA-CAA-008, as amended

The Environmental Protection Agency, Region III ("EPA"), hereby gives notice that the United States Department of the Navy ("Navy") has demonstrated, to the satisfaction of EPA, that the Navy is in compliance with the terms of the Federal Facility Compliance Agreement, Naval Training Center Bainbridge, Docket No. III-FCA-CAA-008, as amended (the "Agreement"). The Agreement is hereby terminated, EXCEPT that this notice shall not terminate the Navy's obligation to comply with any continuing obligations under the Agreement including, but not limited to, Sections 9 ("Preservation of Records") and 10 ("Data and Document Availability").

Dated: _____

Signature: _____

Title: _____

APPENDIX C
STATEMENT OF WORK FOR THE EXCAVATION, SURFACE PICKUP, AND DISPOSAL OF RESIDUAL TRANSITE

STATEMENT OF WORK FOR THE EXCAVATION, SURFACE PICKUP, AND DISPOSAL OF RESIDUAL TRANSITE

FORMER NAVAL TRAINING CENTER BAINBRIDGE
PORT DEPOSIT, MARYLAND

STATEMENT OF WORK FOR THE EXCAVATION, SURFACE PICKUP, AND DISPOSAL OF RESIDUAL TRANSITE

FORMER NAVAL TRAINING CENTER BAINBRIDGE
PORT DEPOSIT, MARYLAND

30 November 1998

Prepared for:

Engineering Field Activity Chesapeake
Naval Facilities Engineering Command

Washington, D.C.

Prepared by:

The Environmental Company, Inc.
2496 Old Ivy Rd., Suite 300 (P.O. Box 5127)
Charlottesville, Virginia 22903 (22905)

Table of Contents

Acronym List

ACBM	Asbestos-Containing Building Materials
ACWM	Asbestos-Containing Waste Materials
ADCM	Alternative Daily Cover Material
CAA	Clean Air Act
CQAP	Construction Quality Assurance Plan
DET	Environmental Detachment Charleston
DMS	Depth Measuring Stake
EFA	Engineering Field Activity (Chesapeake)
E&S	Erosion and Sediment
EPA	U.S. Environmental Protection Agency
FFCA	Federal Facility Compliance Agreement
HSP	Health and Safety Plan
MDE	Maryland Department of the Environment
NESHAP	National Emission Standards for Hazardous Air Pollutants
NAVFAC	Naval Facilities Engineering Command
NAVOSH	Navy Occupational Safety and Health
NTC	Naval Training Center
OSHA	Occupational Safety and Health Administration
SOW	Statement of Work
TEC	The Environmental Company, Inc.

I. PURPOSE

The purpose of this Statement of Work (SOW) is to define the requirements for implementation of remedial work activities at former Naval Training Center (NTC) Bainbridge as outlined in the Federal Facility Compliance Agreement (FFCA) between the U.S. Navy and the U.S. Environmental Protection Agency (EPA).

Work activities at former NTC Bainbridge, consisting of the excavation, surface pickup and disposal of residual transite in soil, shall be performed in accordance with procedures detailed in the FFCA. The EPA's and the Navy's mutual purpose in entering into the FFCA was to establish a standard work practice that will ensure compliance with the Clean Air Act (CAA), Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP), and the FFCAs for the Bainbridge site now and in the future.

A. Background

The former NTC Bainbridge covers an area of approximately 1,250 acres in Port Deposit, Maryland. It was used primarily as a training center for new recruits from the early 1940s through the mid-1970s. The Navy closed the installation in 1976. During the 1980s, the U.S. Department of Labor operated a Job Corps Program at the facility. This program ended in 1990. In 1986, special federal legislation was passed allowing the Navy to dispose of the base, and plans were initiated for transfer of the property to the State of Maryland. The Bainbridge facility has undergone various remediation efforts to make it suitable for transfer.

Closure of the base included the demolition and disposal of more than 400 buildings, many of which were constructed with some asbestos-containing building materials (ACBM). As a result of the demolition, although much of the demolition debris was safely deposited in an on-site landfill, post-demolition inspections revealed that some pieces of the exterior transite siding and interior wallboard (ACBM) remain scattered on the ground and in the soil at many of the former building sites. The EPA is requiring the Navy to take additional action regarding the residual transite in the soil.

This SOW presents the work activities that are to be performed at NTC Bainbridge, as agreed upon by the Navy and the EPA and as documented in the FFCA. This work includes the excavation and disposal of soil containing residual transite from building demolition sites throughout NTC Bainbridge. The Environmental Company, Inc. (TEC), under contract with EFA Chesapeake, will provide field inspection services for the Navy. The chosen excavation workforce is Environmental Detachment Charleston (DET).

are defined on the maps in Appendix A of this SOW. Eight of the parcels contain one or more Excavation Areas.

"Pickup Area" shall mean the area in which the Navy is required to pick up ACWM from the surface in accordance with the FFCA. The sole Pickup Area is in Parcel 4 (Building 101), and is depicted on the map in Appendix A.

"Work" shall mean all of the activities described in Section II of this SOW and all other activities needed to properly complete the described activities.

II. REQUIREMENTS

DET is to implement remedial work activities under this SOW in accordance with the procedures detailed in the FFCA between the Navy and the EPA. To complete the "Standard Work Practices and Compliance Requirements" as defined in the FFCA, DET will perform the work as follows.

A. Project Personnel

To perform the work activities at NTC Bainbridge the following key personnel have been identified.

- The EPA Project Manager will be Mr. Garry Sherman
  Phone: (215) 814-5267 Fax: (215) 814-3113
  Email: sherman.garry@epamail.epa.gov

- The Navy Project Manager will be Mr. Kenneth Booth
  Phone: (202) 685-3291 Fax: (202) 433-7018
  Email: kmbooth@efaches.navfac.navy.mil

- The TEC Project Manager will be Mr. Kenon Blackwood, P.E.
  Phone: (804) 295-4446 Fax: (804) 295-5535
  Email: krblackwood@tecinc.com

- The primary Navy/TEC Site Inspector will be Mr. Steve Bliley
  Phone: (804) 295-4446 Fax: (804) 295-5535

- The DET Site Supervisors will be Ms. Terry Lewis
  Phone: (843) 743-6777 ext. 147 Fax: 843 743-9413
  Email: tlewis@edc.net Pager: (888) 703-7106
  and Mr. David Gabrielli
  Phone: (843) 743-6777 ext. 152 Fax: (804) 295-5535
  Email: dgabrielli@edc.net Pager: (877) 830-1109

The sequence of operations will generally adhere to the following parcel order; Parcel 15, Parcel 5, Parcel 6, Parcel 8, Parcel 13, Parcel 9, Parcel 12, and Parcel 7 (see site map in Appendix A). This order should be considered as a general excavation plan, subject to change as Site conditions dictate.

Each step in this sequence of operations is addressed in detail in items 1 through 12 of this section:

(1) Brush Clearing and Removal of Surface Rubble

Prior to the start of excavation activities, DET will begin clearing brush and overgrowth from the excavation areas. A dedicated operator and bush-hog type equipment will be used for brush removal to stay ahead of the excavation crew throughout the duration of the project.

It is estimated that the brush clearing operation will remain at least two weeks ahead of the excavation. However, brush removal will be performed on an as needed basis to allow the excavation crews to complete their work assignments.

If any significant amount of large surface rubble (i.e. large pieces of concrete, steel reinforcing bar, timber, etc.) exists within an excavation area, it will be identified during the brush clearing operation and removed using appropriate equipment prior to excavation. Surface rubble will be stockpiled outside of the excavation area and left on site.

(2) Installation of Erosion Controls

Following brush removal, DET will begin placing erosion and sediment (E&S) controls around those areas to be excavated. E&S control measures will be installed as shown in the approved E&S control plans.

E&S controls generally include silt fence, hay bales and sediment traps as required by site conditions and approved in the E&S control permit issued by the Maryland Department of the Environment (MDE). Procedures for the installation and maintenance of the E&S controls can be found in the E&S control plan included in Appendix C.

(3) Placement of Excavation Stakes

DET personnel will place excavation stakes into each delineated area to guide the equipment operators during removal of the soil. The stakes are generally placed in rows approximately 13 feet apart and are used to establish a pattern for the excavation equipment to follow. These stakes are either removed during excavation activities

If two DMSs are disturbed in the same excavation area or the area is not sufficiently represented by the remaining DMSs present following a disturbance, the TEC Site Inspector will replace at least one of the damaged DMSs to enable the needed visual verification.

(5) Video Documentation of Excavation Area (TEC)

Immediately after driving all the DMSs for a particular excavation area, TEC personnel will record images of the excavation area on videotape, including a pan over the entire area and images of the delineation stakes and the DMSs. All excavation areas will be identified by their corresponding parcel and excavation area number in the video.

While shooting the videotape, the TEC Site Inspector shall note in a written log the number of the excavation area depicted, the position from which the images were taken (e.g., "midway along the southern boundary line") and the direction in which the camera lens was facing (e.g., "looking north"). Excavation activities may begin once video documentation of the area is complete.

(6) Excavation of Area and Soil Disposal

DET shall excavate soil from the parcels as defined in FFCA Section 4.1.2. The excavation depths to be removed from each Parcel are listed in Table 4-1 of the FFCA and are delineated on the site map in Appendix A. The horizontal boundaries of each Excavation Area are defined by delineation stakes in the field, by the site map, and coordinate data in Appendix B.

DET personnel will utilize typical excavation equipment, including, but not limited to bulldozers, trackhoes, and front-end loaders. Excavation operations will consist primarily of DET equipment operators pushing soil to one end of the excavation area with a bulldozer. Where possible, DET personnel will push the excavated soil towards a road for easier loading.

In parcels with small or inaccessible excavation areas, soil from multiple excavation areas may be combined for loading purposes. In such cases, these areas may be recorded on one Verification Form. DET should not cross parcel lines when combining smaller sites onto one verification Form. The total number of truckloads and their volume taken from these combined stockpiles must be recorded for input onto the Verification Form.

excavation area has been excavated to the depth required by the FFCA. If the Site Inspector determines that the required excavation depth has not been reached, DET shall excavate again, and the Site Inspector shall measure again.

If the Site Inspector determines that the required excavation depth has been reached in a particular excavation area, he will record images of the excavation area on videotape showing that the required excavation depth has been reached, including a pan over the entire area and images of the delineation stakes and each DMS.

The video images shall be taken, to the greatest degree possible, from the same positions and facing in the same directions, as the video images recorded immediately after driving the DMSs, as described in item (5) Video Documentation of Excavation Area.

While shooting the videotape, the Site Inspector will note in a written log the number of the excavation area depicted, the position from which the images were taken (e.g., "midway along the southern boundary line") and the direction in which the camera lens was facing (e.g., "looking north").

(9) EPA/MDE Certification of Excavated Area

The tentative schedule for EPA/MDE inspection and certification activities is every other Friday. EPA/MDE is anticipated to be onsite approximately every 14 days to inspect and certify or deny completed excavation areas.

Any area that is denied certification will be scheduled for additional excavation as soon as possible. Operations 6, 7, 8, and 9 will be repeated until certification is obtained. Such delays are to be avoided to reduce the erosion potential from unstabilized sites per E&S control requirements. Following EPA/MDE certification of each excavated area, DET may begin restoration of the approved site.

(10) Removal of Stakes and Final Grading

DET will be responsible for the removal of any stakes that remain in the excavation area. DMS stakes are to be removed only following EPA certification of the area and after approval by the TEC Inspector to DET personnel.

DET will perform final grading activities at this time. Each excavated area should be graded to allow for positive drainage to prevent

Assuming the soil and ACWM will be disposed of at a landfill in Maryland, the landfill facility must possess a valid refuse disposal permit, which allows for the acceptance of asbestos. The material may be used as an Alternative Daily Cover Material (ADCM) by the landfill if the landfill operator receives written approval from MDE for its use.

DET is to retain copies of all dump/weight receipts from the contracted landfill and submit legible copies of them to the TEC Site Inspector for inclusion in the associated Quarterly Reports. The TEC Site Inspector will send quarterly reports to the Navy Project Manager for submission to the EPA/MDE.

(2) Waste Transportation

DET will be responsible for coordinating the transportation of all excavated soil from the site to the disposal facility. A travel route should be chosen which will have the minimum impact on the public. The waste transporter is to provide trucks adequate for transporting the anticipated volume of excavated soil.

Trucks utilized for transporting excavated soil are not required to be lined, however they must be covered. No wetting is required provided that excessive dust does not escape from the trucks. All applicable Maryland Department of Transportation requirements dealing with the transportation of materials such as soil must be enforced to prevent spillage. DET and/or its contractors will be responsible for cleanup of any spillage of soil/debris during transport. Additionally, if a landfill outside of Maryland is chosen, all applicable state laws dealing with the transportation of soils for those states entered must be followed.

Soil transportation for this project will be allowed during daylight hours only. Based upon the nature of this material, it has been determined by EPA/MDE that no personal respiratory protective equipment will be required for handlers of this soil. DET is to retain copies of all waste manifests from the subcontractor and submit legible copies of them to the TEC Site Inspector for inclusion in the associated Quarterly Reports.

D. Building 101

Building 101, located in Parcel 4, will require manual pickup of residual ACWM by DET personnel. The Navy is required to notify the EPA of the planned work schedule for this building site 14 days prior to the pickup.

III. SUBMITTALS

A. Reports

The following reports are requirements under the FFCA.

(1) Daily Reports

TEC shall coordinate with DET to prepare a daily status report. These reports will be sent to the Navy Project Manager via Email.

(2) Quarterly Reports

All quarterly reports will be prepared by TEC, with DET input, by the fifth of January, April, July, and October. These reports will be sent to the Navy Project Manager *in triplicate and shall include, at a minimum:*

- a certification statement as defined in the FFCA, Section 8.4;
- the reporting requirements defined in the FFCA, Section 8.3;
- all shipping documentation accumulated during that particular quarter. This documentation will include, but not be limited to, any manifests, vehicle inspection documentation and weight slips from the landfill accepting material for disposal; and
- videotapes of the excavation areas (before and after excavation).

The Navy shall forward Quarterly Reports to the EPA and MDE by the 15th of January, April, July, and October of each year for the areas in which excavation has been completed in the previous quarter.

B. Notifications

All reports and notifications to EPA/MDE pertaining to this project will be made through the Navy Project Manager.

(1) 10 Day Notification

10 days prior to the start of any excavation or other work performed under the FFCA, DET shall give a onetime written notification, including the identities and assigned tasks of all contractors involved in implementing the work, to the EPA Project Manager, the Navy Project Manager, and MDE.

A separate notification is required to be made to the EPA Project Manager, the Navy Project Manager and MDE 10 days prior to any modification to contractor identities or assigned tasks.

- Training Requirements
- Notification Requirements
- Medical or Site Monitoring Requirements

DET is also responsible for maintaining all records associated with HSP requirements.

(2) Construction Quality Assurance Plan

DET shall prepare and submit a Construction Quality Assurance Plan (CQAP) prior to beginning work activities at NTC Bainbridge. The CQAP is to document measures to ensure that all work is carried out in a manner consistent with Federal, state and local regulations, Navy policy, and the FFCA.

The CQAP shall address issues and procedures relating to the excavation, transportation, and disposal of the soil and ACWM removed from NTC Bainbridge.

At a minimum, the following items should be covered in the CQAP for all work described in this SOW.

- Daily Documentation Procedures
- Verification of Soil Removal Depths
- Documentation of the Number of Truck Loads From Each Excavation Site
- Procedures and Contingencies for Protection of DMSs
- Dust Control
- Soil Transportation and Disposal Requirements

DET will not begin work until both plans have been approved by the Navy Project Manager.

IV. SCHEDULE

The planned start date for this project is January 1999, depending on the availability of funds and the approval of all necessary permits. Work must commence by May 1999 per Section 4.1.5 of the FFCA.

The anticipated completion date for the project is September 1999, but under no circumstances will the completion date extend beyond July 2000 per Section 4.1.6 of the FFCA.

References

(a) Second Amendment to the Federal Facilities Complince Agreement (FFCA), Docket No. III-FCA-CAA-008, Signed on 30 July 1998 between USEPA and US Navy.

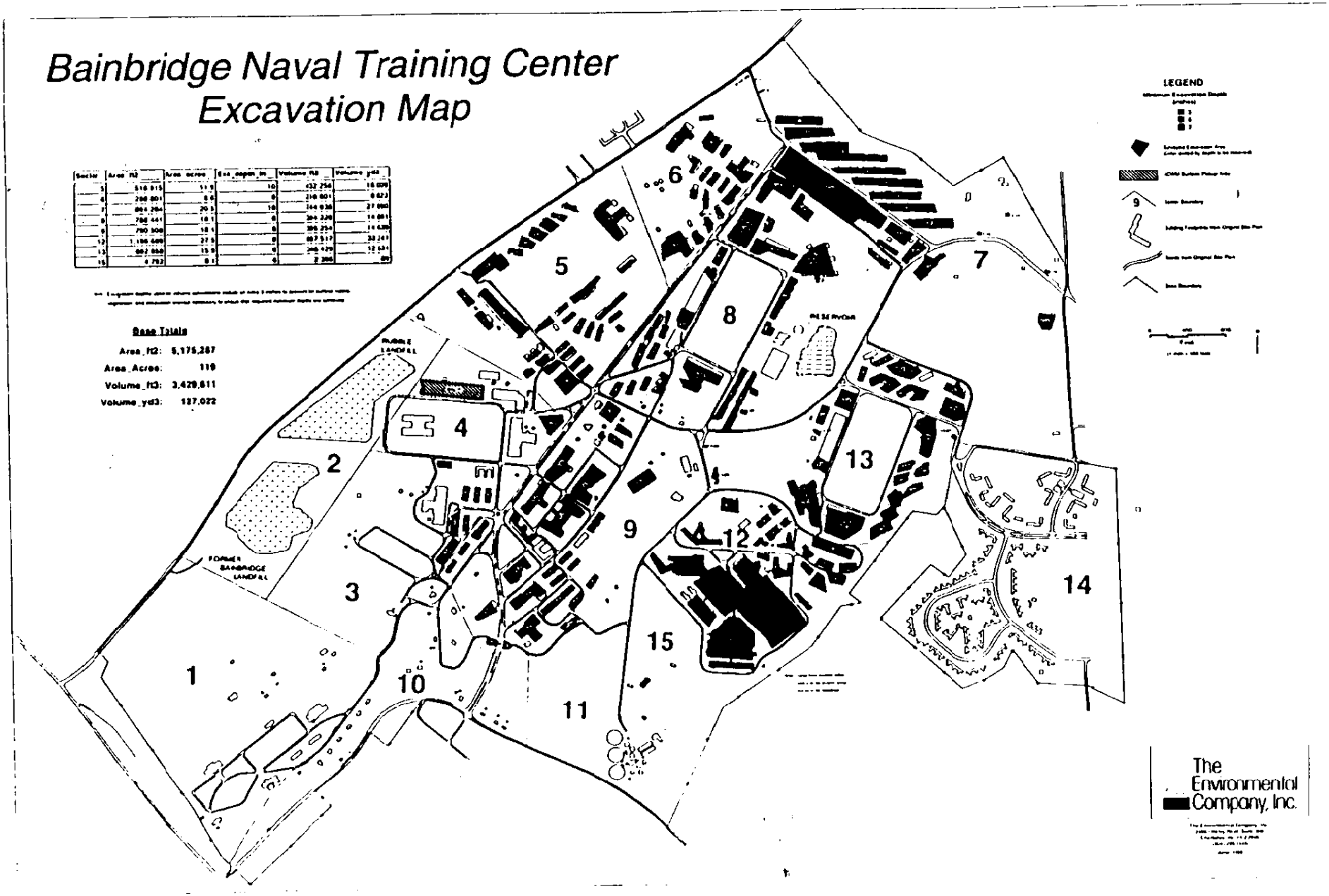
(b) Guide for AE Firms Performing Services for: Engineering Field Activity Chesapeake, Naval Facilities Engineering Command, June 1994.

(c) Maryland Department of the Environment Letter dated 15 May 1998 addressing project issues related to the removal of contaminated soil from Bainbridge NTC.

Appendix A:

Bainbridge Naval Training Center
Excavation Map and Excavation Area Statistics

Bainbridge Naval Training Center
Excavation Map



Sector	Area_ft2	Area_acres	Excav_depth_ft	Volume_ft3	Volume_yd3
5	516,915	11.9	10	432,256	16,009
6	286,801	6.6	6	216,601	8,023
7	884,264	20.3	10	744,938	27,590
8	766,441	18.1	6	384,329	14,234
9	760,308	18.1	6	386,254	14,306
12	1,196,589	27.5	6	887,517	32,871
13	582,868	13.9	6	346,179	12,821
15	6,792	0.1	6	2,366	88

Base Totals

Area_ft2:	5,175,287
Area_Acres:	119
Volume_ft3:	3,429,611
Volume_yd3:	127,022

The Environmental Company, Inc.

Appendix A: Excavation Area Statistics

Note: Excavation depths used for volume calculations include an extra 3 inches to account for surface rubble, vegetation, and excavation overcut necessary to ensure that required minimun depths are achieved

Sector: **5** *Min. Excav. Depth(in):* 7 *Calculation Excav. Depth(in):* 10

Area Number	Included Buildings	Area (Ft2)	Area (Acres)	Perimeter (Ft)	Volume (Ft3)	Volume (Yd3)
05-01	205	13,423	0.3	536	11,181	414
05-02	203	49,173	1.1	1,112	40,961	1,517
05-03	211	8,252	0.2	410	6,874	255
05-04	212/233	16,910	0.4	550	14,086	522
05-05	213/234	17,537	0.4	550	14,608	541
05-06	214/235	17,055	0.4	529	14,207	526
05-07	215	8,857	0.2	427	7,378	273
05-08	216	6,349	0.1	427	5,289	196
05-09	204	15,816	0.4	581	13,175	488
05-10	201	65,264	1.5	1,508	54,365	2,014
05-11	202/202D	68,537	1.6	1,512	57,092	2,115
05-12	217	13,309	0.3	562	11,086	411
05-13	218	6,438	0.1	367	5,363	199
05-14	219/220/236/237	27,979	0.6	913	23,307	863
05-15	207	8,467	0.2	464	7,053	261
05-16	206	8,760	0.2	425	7,297	270
05-17	226	4,531	0.1	376	3,775	140
05-18	239/240	8,542	0.2	381	7,115	264
05-19	221	8,748	0.2	415	7,287	270
05-20	223	8,861	0.2	440	7,381	273
05-21	227	11,539	0.3	485	9,612	356
05-22	222	11,140	0.3	478	9,279	344
05-23	224	10,168	0.2	466	8,470	314
05-24	228	9,316	0.2	468	7,760	287
05-25	230/231	18,900	0.4	901	15,744	583
05-26	209/210	36,465	0.8	765	30,375	1,125
05-27	225	11,036	0.3	479	9,193	340
05-28	208	10,364	0.2	466	8,633	320
05-29	229	6,242	0.1	446	5,200	193
05-30	232	7,118	0.2	418	5,929	220
05-31	241	3,821	0.1	255	3,183	118
Totals:		518,915	11.9	18,111	432,256	16,009

Sector: 8 *Min. Excav. Depth(in):* 3 *Calculation Excav. Depth(in):* 6

Area Number	Included Buildings	Area (Ft2)	Area (Acres)	Perimeter (Ft)	Volume (Ft3)	Volume (Yd3)
08-01	408	13,244	0.3	507	6,622	245
08-02	411	21,595	0.5	693	10,798	400
08-03	413/415	18,124	0.4	752	9,062	336
08-04	409	10,186	0.2	456	5,093	189
08-05	412	13,488	0.3	530	6,744	250
08-06	414/433	15,960	0.4	706	7,980	296
08-07	410	9,647	0.2	434	4,824	179
08-08	406	17,573	0.4	822	8,786	325
08-09	434	3,406	0.1	253	1,703	63
08-10	401	29,092	0.7	692	14,546	539
08-11	405	14,505	0.3	543	7,252	269
08-12	416-419	92,131	2.1	1,271	46,065	1,706
08-13	649	71,894	1.6	1,362	35,947	1,331
08-14	402/402A	73,797	1.7	1,458	36,898	1,367
08-15	403	50,761	1.2	1,224	25,381	940
08-16	440/441	13,742	0.3	496	6,871	254
08-17	650	33,904	0.8	872	16,952	628
08-18	427/429/431	40,133	0.9	1,412	20,067	743
08-19	426/437	13,352	0.3	477	6,676	247
08-20	407/425	40,180	0.9	1,202	20,090	744
08-21	420-424/438/439	105,351	2.4	1,480	52,676	1,951
08-22	428/430/432	46,261	1.1	1,522	23,131	857
08-23	435	1,882	0.0	190	941	35
08-24	436	6,254	0.1	319	3,127	116
08-25	687/687A	19,536	0.4	736	9,768	362
08-26	401	12,443	0.3	463	6,221	230
Totals:		788,441	18.1	20,871	394,220	14,601

Sector: 12 *Min. Excav. Depth(in):* 6 *Calculation Excav. Depth(in):* 9

Area Number	Included Buildings	Area (Ft2)	Area (Acres)	Perimeter (Ft)	Volume (Ft3)	Volume (Yd3)
12-01	845	26,439	0.6	896	19,829	734
12-02	857	9,070	0.2	392	6,802	252
12-03	859	10,340	0.2	445	7,755	287
12-04	858	5,294	0.1	295	3,970	147
12-05	842/843/844	36,840	0.8	1,447	27,630	1,023
12-06	855	8,898	0.2	454	6,673	247
12-07	856	13,182	0.3	482	9,887	366
12-08	854	14,562	0.3	603	10,922	405
12-09	853	47,552	1.1	1,101	35,664	1,321
12-10	852	10,455	0.2	434	7,841	290
12-11	851	14,354	0.3	522	10,766	399
12-12	850	14,294	0.3	521	10,721	397
12-13	846	7,050	0.2	362	5,288	196
12-14	831	25,756	0.6	952	19,317	715
12-15	847	11,169	0.3	459	8,377	310
12-16	848 / 862	23,591	0.5	654	17,693	655
12-17	849	19,358	0.4	586	14,519	538
12-18	865	13,595	0.3	601	10,196	378
12-19	801-805 / 807-809 / 819/ 823-830 /832-84	621,593	14.3	5,592	466,194	17,266
12-20	868/822/812/814/816	43,814	1.0	921	32,860	1,217
12-21	811-816/ 821-822 / 868	186,983	4.3	1,899	140,238	5,194
12-22	817/818/871	32,500	0.7	1,093	24,375	903
Totals:		1,196,689	27.5	20,710	897,517	33,241

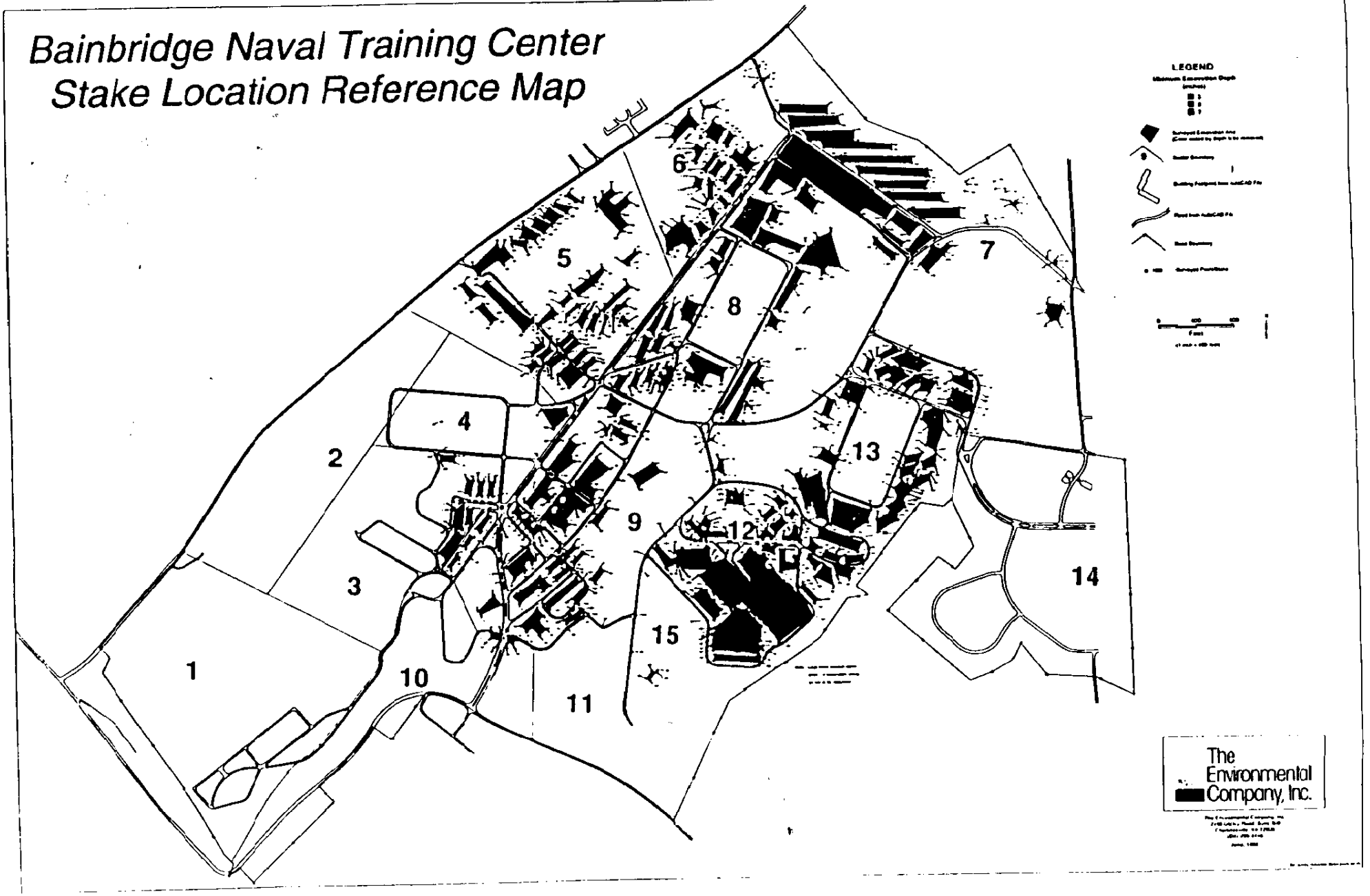
Summary

Sector	Area (Ft2)	Area (Acres)	Perimeter (Ft)	Minimum Excavation Depth	Volume (Ft3)	Volume (Yd3)
5	518,915	11.9	18,111	7	432,256	16,009
6	288,801	6.6	9,360	6	216,601	8,022
7	894,284	20.5	18,799	7	744,938	27,590
8	788,441	18.1	20,871	3	394,220	14,601
9	790,508	18.1	23,968	3	395,254	14,639
12	1,196,689	27.5	20,710	6	897,517	33,241
13	692,858	15.9	17,213	3	346,429	12,831
15	4,792	0.1	302	3	2,396	89
Totals:	5,175,287	118.8	129,334		3,429,611	127,022

Appendix B:

Bainbridge Naval Training Center
Stake Location Reference Map and Survey Coordinates

Bainbridge Naval Training Center
Stake Location Reference Map



Survey Coordinates

Point Number	*Easting*	*Northing*	*Description*
1	647005.85	1053727.57	START
2	647529.88	1053700.52	TRV
3	648089.6	1053613.08	TRV
101	646973.23	1053688.82	STK
102	646907.51	1053676.46	STK
103	646919.56	1053569.03	STK
104	646995.77	1053577.51	600A
105	646954.05	1053752.24	600
106	646922.11	1053849.16	600
107	646878.52	1053801.27	600
108	646878.7	1053741.13	600
109	647067.32	1053876.49	618
110	647052.64	1053999.01	618
111	647041.33	1054157.5	618
112	647280.5	1053676.59	602
113	647169.18	1053469.98	602
114	647207.51	1053435.44	602
115	647382.41	1053591.68	602
116	647374.38	1053798.73	619
118	647358.63	1053816.15	SPUR-NAIL
119	647475.24	1054058.61	619
120	647611.81	1054069.17	619
121	647506.5	1054186.99	619
122	647446.14	1054114.9	619
123	647560.65	1054245.08	604
124	647598.16	1054209.9	610
125	647642.74	1054174.16	611
126	647687.21	1054129.29	611
127	647803.4	1054248.29	611
128	647756.58	1054299.16	611
129	647716.63	1054345.26	610
130	647680.34	1054381.98	610
131	647602.33	1054436.35	609

Point Number	Easting	Northing	Description
168	648445.06	1054434.71	SPUR-NAIL
169	648090.78	1054302.98	622
170	648158.35	1054346.06	622
171	648191.03	1054304.76	622
172	648342.07	1054407.97	622
173	648303.61	1054491.1	622
174	648369.48	1054550.59	622
175	648260.45	1054195.72	622
176	648285.5	1054151.33	622
177	648324.58	1054243.57	622
178	648362.61	1054201.77	622
179	648402.16	1054231.89	622
180	648371.61	1054274.28	622
181	648438.27	1054319.19	622
182	648467.5	1054273.57	622
183	648539.61	1054330.71	622
184	648561.2	1054366.98	624
185	648622.04	1054401.18	624
186	648586.34	1054407.94	624
187	648883.16	1054597.22	624
188	648764.22	1054764.39	624
189	648590.86	1054530.55	624
190	648537.99	1054607.51	624
191	648431.28	1054577.38	624
192	648677.84	1054209.18	623
193	648831.82	1054388.26	623
194	648877.55	1054334.71	623
195	649006.74	1054413.77	623
196	649063.12	1054325.09	623
197	648740.73	1054113.01	623
198	649046.56	1054208.86	SPUR
199	648188.48	1053622.46	SPUR-NAIL
200	649163.64	1054160.18	708
201	649365.7	1054032.38	708
202	649397.97	1054285.06	708
203	649311.69	1054300.21	708

Point Number	Easting	Northing	Description
240	648004.62	1053245.46	603
241	648048.35	1053174.93	603
242	647810.47	1053000.45	603
243	647755.91	1053081.85	603
244	647685.7	1053111.33	750
245	647664.2	1053137.45	750
246	647776.19	1053223.69	750
247	647815.87	1053194.58	750
248	649710.94	1054516.61	SPUR
249	650322.72	1053895.38	SPUR
250	649750.94	1054451.65	209
251	649605.86	1054306.63	209
252	649879.58	1054309.42	209
253	649745.54	1054185.16	209
254	649933.43	1054252.68	210
255	649970.16	1054196.85	210
256	649815.69	1054114.46	210
257	649863.8	1054071.31	210
258	649893.63	1054024.21	222
259	650066.85	1054175.43	224
260	649935.4	1053975.5	222
261	650178.93	1054293.94	224
262	650036.16	1054089.52	222
263	650147.43	1054338.48	224
264	649995.41	1054125.75	222
265	650031.45	1054215.48	224
266	650036.2	1054044.22	221
267	650069.88	1054010.59	221
268	650004.68	1054231.08	225
269	650051.08	1053953.92	221
270	650129.34	1054351.44	224
271	649972.57	1053893.88	221
272	650079.52	1054397.73	225
273	649930.41	1053904.22	221
274	649967.06	1054261.81	225
275	649830.95	1053847.92	240

Point Number	Easting	Northing	Description
312	650502.69	1054176.43	218
313	650559.53	1054299.99	218
314	650601.43	1054280	218
315	650643.46	1054305.5	219
316	650583.2	1054366.91	219
317	650757.94	1054453.04	219
318	650707.33	1054509.25	219
319	650801.29	1054492.68	220
320	650746.52	1054545.48	220
321	650896.43	1054600	220
322	650872.48	1054634.39	220
323	650477.99	1054387.48	226
324	650388.84	1054249.3	226
325	650496.65	1054357.49	226
326	650369.97	1054262.81	226
327	650436.82	1054431.57	227
328	650309.06	1054358.93	227
329	650427.19	1054491.03	227
330	650248.27	1054416.06	227
331	650402.43	1054536.9	228
332	650238.45	1054467.49	228
333	650401.19	1054583.83	228
334	650226.97	1054525.95	228
335	650384.96	1054649.94	229
336	650200.29	1054603.34	229
337	650376.23	1054684.63	229
338	650193.79	1054632.57	229
339	650363.77	1054747.51	SPUR
340	650418.15	1054641.68	230
341	650432.04	1054595.44	230
342	650731.57	1054872.26	230
343	650530.08	1054853.1	231
344	650701.32	1054914.15	230
345	650495.03	1054871.94	231
346	650449.38	1054734.83	231
347	650387.36	1054736.33	231

Point Number	Easting	Northing	Description
384	651158.11	1053903.45	212
385	651300.62	1053780.46	212
386	651286.12	1053776.54	212
387	651264.96	1053774.09	211
388	651176.5	1053744.4	211
389	651147.82	1053809.22	211
390	651151.19	1053657.06	211
391	651080.11	1053801.17	211
392	651108.4	1053656.94	211
393	651571.68	1054381.26	216
394	651552.05	1054526.93	SPUR
395	651569.3	1054516.45	202
396	651658.9	1054589.36	202
397	651729.73	1054681.95	202
398	651678.64	1054733.51	202
399	651606.44	1054654.65	202
400	651552.91	1054723.94	202
401	651651.65	1054831.33	202
402	651591.72	1054879.52	202
403	651473.28	1054767.7	202
404	651353.63	1054854.94	202
405	651284.02	1054788.35	202
406	651282.62	1054813.71	SPUR
407	650939.68	1054872.75	SPUR
408	650559.84	1054752.39	SPUR
409	650363.26	1054747.36	PT339 IN ERROR
410	650167.63	1055352.33	SPUR
411	649911.15	1055041.87	411
412	649913.79	1054995.2	411
413	649962.52	1054979.85	411
414	650021.4	1055124	412
415	650191.44	1055064.99	411
416	650011.71	1055200.24	412
417	650159.16	1055142.2	411
418	650203.44	1055156.96	413
419	650179.77	1055273.75	412

Point Number	Easting	Northing	Description
456	652606.71	1056388.18	651
457	652694.52	1056884.05	651
458	652608.39	1056883.78	GREEN
459	652412.55	1056640.65	GREEN
460	652585.88	1056966.65	GREEN
461	652315.13	1056694.51	GREEN
462	652500.61	1057022.72	GREEN
463	652315.73	1056834.62	GREEN
464	652440.44	1057157.09	GREEN
465	652316.58	1057160.15	GREEN
466	652238.7	1056854.15	GREEN
467	652145.01	1056983.14	GREEN
468	652243.56	1057562.93	GREEN
469	652305.57	1057563.47	GREEN
470	652090.8	1057056.49	GREEN
471	652050.82	1057195.23	GREEN
472	651979.07	1057231.13	GREEN
473	651900.22	1057387.14	GREEN
474	651832.67	1057412.37	GREEN
475	651652.52	1057613.09	SPUR
476	651786.14	1057493.38	GREEN
477	651839.59	1057912.16	GREEN
478	651716.15	1057596.44	GREEN
479	651927.7	1057947.58	GREEN
480	651618.33	1057755.94	GREEN
481	651966.88	1057960.83	GREEN
482	651803.07	1058074.54	GREEN
483	652050.94	1057931.75	GREEN
484	651710.92	1058114.54	GREEN
485	651657.39	1058287.95	GREEN
486	652105.32	1057781.38	GREEN
487	652177.1	1057768.06	GREEN
488	651548.6	1058295.23	GREEN
489	651566.46	1057227.31	GREEN
490	651627.16	1057295.77	GREEN
491	651798.44	1057362.8	GREEN

Point Number	Easting	Northing	Description
528	649903.29	1057902.36	BLUE
529	649857.36	1057909.24	BLUE
530	649854.4	1057871.42	BLUE
531	649819.38	1057902.45	BLUE
532	649765.5	1057745.13	BLUE
533	649784.38	1057899.32	BLUE
534	649706.15	1057798.92	BLUE
535	649846.36	1057805.58	BLUE
536	649749.49	1057660.82	BLUE
537	649913.99	1057737.95	BLUE
538	649801.71	1057574.26	BLUE
539	649920.28	1057721.2	BLUE
540	649878.83	1057609.71	BLUE
541	649965.01	1057585.72	BLUE
542	649986.87	1057554.38	SPUR
543	649809.26	1057480.9	BLUE
544	649900.39	1057450.97	BLUE
545	649862.65	1057376.99	BLUE
546	650014.27	1057439.19	BLUE
547	649877.05	1057325.19	BLUE
548	650033.17	1057371.67	BLUE
549	649795.98	1058093.55	BLUE
550	649769.17	1057947.22	BLUE
551	649686.86	1057883.33	BLUE
552	649687.25	1058026.71	BLUE
553	649734.6	1058312.35	SPUR
554	649818.6	1058236.35	BLUE
555	649875.8	1058263.35	BLUE
556	649869.14	1058357.79	BLUE
557	649878.32	1058415.73	BLUE
558	649914	1058389.18	BLUE
559	649761.39	1058480.79	BLUE
560	649713.59	1058467.1	BLUE
561	649904.84	1058414.66	BLUE
562	649738.96	1058262.97	BLUE
563	649624.5	1058223.19	BLUE

Point Number	Easting	Northing	Description
600	648901.75	1058111.83	BLUE
601	648826.48	1058055.5	BLUE
602	648808.29	1057959.68	BLUE
603	648466.28	1057814.54	BLUE
604	648492.14	1057796.18	BLUE
605	648512.46	1057794.77	BLUE
606	648467.99	1057619.51	BLUE
607	648540.45	1057786.2	BLUE
608	648409.02	1057661.13	BLUE
609	648321.19	1057750.78	BLUE
610	648318.11	1057514.72	BLUE
611	648369.64	1057720.14	BLUE
612	648182.24	1057526.82	BLUE
613	648356.73	1057310.38	SPUR
614	648421.61	1057455.08	SPUR
615	648291.51	1057420.55	BLUE
616	648322.06	1057311.29	BLUE
617	648523.11	1057073.45	BLUE
618	648338.18	1057271.45	BLUE
619	648291.77	1057262.35	BLUE
620	648252.95	1057044.31	BLUE
621	648173.58	1057261.8	BLUE
622	648292.35	1057012.55	BLUE
623	648317.21	1056915.46	BLUE
624	648607.37	1056976.85	BLUE
625	648501.96	1056852.65	BLUE
626	648496.45	1056826.99	BLUE
627	648629.68	1056961.39	BLUE
628	648449.96	1056820.05	BLUE
629	648800.24	1056932.86	BLUE
630	648428.23	1056775.88	BLUE
631	648725.51	1056756.84	BLUE
632	648612.77	1056716.86	BLUE
633	648252.01	1057032.21	SPUR
634	648801.33	1056709.18	BLUE
635	648772.71	1056633.17	BLUE

Point Number	Easting	Northing	Description
672	647826.47	1056679.62	831
673	647768.76	1056721.55	831
674	647834.26	1056597.91	831
675	647729.24	1056537.59	831
676	647965.75	1056583.43	831
677	647966.68	1056532.89	831
678	648074.4	1056566.54	846
679	648052.43	1056732.54	846
680	648104.13	1056558.41	846
681	648205.79	1056700.93	846
682	648118.17	1056635.78	846
683	647992.99	1056360.81	846
684	647988.66	1056479.21	846
685	647949.1	1056354.64	846
686	647917.32	1056478.95	846
687	647917.68	1056368.72	832
688	647861.98	1056405.11	832
689	647899.55	1056314.67	832
690	647970.79	1056236.53	832
691	647826.12	1056095.07	832
692	647609.97	1056285.94	832
693	647779.47	1056379.45	832
694	647749.02	1056420.9	832
695	647575.55	1056367.85	832
696	647767.05	1056471.46	832
697	647530.04	1056360.23	823-864
698	647637.64	1056559.42	823-864
699	647479.48	1056423.7	823-864
700	647477.96	1056445.6	823-864
701	647643.99	1056578.7	823-864
702	647444.5	1056589.96	823-864
703	647464.77	1056603.82	823-864
704	647592.6	1056622.82	823-864
705	647553.2	1056631.49	823-864
706	647600.64	1056635.25	823-864
707	647578.85	1056653.69	823-864

Point Number	Easting	Northing	Description
744	647370.79	1056119.41	867-871
745	647554.23	1055842.47	867-871
746	647303.62	1056040.89	867-871
747	647321.29	1056083	867-871
748	647341.42	1056079.37	867-871
749	647310.93	1056206.77	867-871
750	647225.34	1056130.22	867-871
751	647286.91	1056233.97	867-871
752	647198.26	1056172.02	867-871
753	647277.05	1056201.11	867-871
754	647131.38	1056150.36	867-871
755	647182.05	1056216.96	867-871
756	647131.85	1056191.88	867-871
757	647151.37	1056365.91	867-871
758	646984.65	1056348.02	867-871
759	646989.64	1056370.56	867-871
760	646942.41	1056342.89	867-871
761	646942.8	1056389.32	867-871
762	646891.3	1056395.54	867-871
763	646898.95	1056354.6	867-871
764	646848.37	1056354.5	867-871
765	646825.73	1056365.95	867-871
766	646871.09	1056138.79	867-871
767	646757.33	1056371.56	867-871
768	646871.26	1056111.61	867-871
769	646995.84	1056136.21	867-871
770	646992.65	1055877.39	867-871
771	646767.06	1055886.27	867-871
772	646871.93	1055877.06	867-871
773	646834.63	1055895.75	867-871
774	646922.09	1055847.18	867-871
775	647038.26	1055857.17	867-871
776	647075.05	1055905.55	867-871
777	647103.19	1055890.14	867-871
778	647150.79	1055931.29	867-871
779	647104.62	1055843.28	867-871

Point Number	Easting	Northing	Description
816	648176.12	1055674.44	RED
817	648242.86	1055599.11	RED
818	648224.79	1055552.89	RED
819	648153.64	1055702.96	RED
820	648064.4	1055763.3	RED
821	648055.14	1055716.88	RED
822	648321.79	1055731.31	SPUR
823	648422	1055654.21	SPUR
824	647972.51	1055263.74	RED
825	648659.98	1055888.92	SPUR
826	648581.85	1055960.49	RED
827	648517.08	1055995.04	RED
828	648440.16	1055952.18	RED
829	648482.25	1055995.14	RED
830	648484.95	1056034.93	RED
831	648516.39	1056030.7	RED
832	648538.62	1056084.32	RED
833	648570.19	1056061.26	RED
834	648598.33	1056138.72	RED
835	648417.5	1056160.01	RED
836	648381.3	1056158.34	SPUR
837	648176.11	1056382.41	RED
838	648181.85	1056389.12	RED
839	648260.08	1056375.62	RED
840	648312.68	1056333.59	RED
841	648206.15	1056426.72	RED
842	648182.2	1056446.85	RED
843	648131.59	1056486.26	RED
844	648247.45	1056590.66	RED
845	648307.2	1056543.19	RED
846	648333.7	1056579.16	RED
847	648099.67	1056473.02	RED
848	648071	1056445.35	RED
849	648104.43	1056392.67	RED
850	648106.87	1056458.49	SPUR
851	648417.61	1056445.85	RED

Point Number	Easting	Northing	Description
888	649462.05	1056191.72	BLUE
889	651243.23	1056691.26	SPUR
890	649620	1055929.34	SPUR
891	649475.92	1056201.8	BLUE
892	649389.65	1055900	BLUE
893	649303.88	1056029.72	BLUE
894	649300.21	1055936.66	BLUE
895	650305.18	1056415.71	BLUE
896	650334.2	1056318.48	BLUE
897	650392.84	1056454.26	BLUE
898	650482.55	1056371.03	BLUE
899	650485.73	1056458.17	BLUE
900	650514.56	1056389.18	BLUE
901	650748.34	1056589.48	BLUE
902	650773.58	1056568.01	BLUE
903	650768.44	1056602.95	BLUE
904	650968.29	1056602.06	BLUE
905	650928.41	1056679.3	BLUE
906	651004.73	1056607.57	BLUE
907	650980.24	1056862.5	BLUE
908	650914.05	1056877.17	BLUE
909	650919.87	1056905.29	BLUE
910	651130.31	1056626.63	BLUE
911	650992.75	1056915.61	BLUE
912	651196.29	1056678.81	BLUE
913	650981.85	1057077.34	BLUE
914	651349.06	1056956.68	BLUE
915	651250.1	1056787.44	BLUE
916	651288.9	1056830.71	BLUE
917	651189.43	1056717.74	BLUE
918	651223.88	1056366.69	BLUE
919	648065.78	1055343.02	SPUR
920	647857.98	1055159.6	SPUR
921	647702.89	1055102.34	SPUR
922	647213.66	1055066.59	SPUR
923	647080.59	1054710.5	SPUR

Point Number	Easting	Northing	Description
960	649222.89	1054684.55	YELLOW
961	649177.76	1054666.36	YELLOW
962	649120.6	1054710.47	YELLOW
963	649445.8	1054726.73	SPUR
964	649587.51	1054824.24	BLUE
965	649628.68	1054758.53	BLUE
966	649638.78	1054921.56	BLUE
967	649758.9	1054827.15	BLUE
968	649629.95	1054994.17	BLUE
969	649758.42	1054915.28	BLUE
970	649795.12	1054990.91	BLUE
971	649781.84	1055042.08	BLUE
972	649703	1054511.45	TIETO248
973	649690.41	1055239.62	BLUE
974	649650.49	1055286.79	FBPPFBLUE
975	649709.84	1055199.05	BLUE
976	649739.16	1055253.57	BLUE
977	649677.67	1055182.53	BLUE
978	649755.83	1055223.98	BLUE
979	649787.38	1055236.29	BLUE
980	649771.23	1055288.04	BLUE
981	649818.41	1055307.6	BLUE
982	649844.46	1055259.79	BLUE
983	649846.04	1055374.52	BLUE
984	649882.14	1055290.45	BLUE
985	649828.87	1055192.96	BLUE
986	649822.59	1055121.12	BLUE
987	649688.34	1055143.68	BLUE
988	649689.49	1055072.67	BLUE
989	649677.55	1055603.02	SPUR
990	649734.79	1055512.73	SPUR
991	649759.43	1055521.24	402BLUE
992	649831.81	1055488.27	402BLUE
993	649791.2	1055603.27	402BLUE
994	649940.13	1055518.76	402BLUE
995	650028.21	1055563.77	402BLUE

Point Number	Easting	Northing	Description
1032	651939.21	1055648.03	RED
1033	651938.81	1055685.01	RED
1034	651969.39	1055610.73	RED
1035	652028.62	1055539.03	RED
1036	652055.43	1055507.68	RED
1037	652138.93	1055546.18	RED
1038	652184.99	1055505.19	RED
1039	652232.05	1055545.45	RED
1040	652189.02	1055628.76	RED
1041	652134.45	1055723.26	RED
1042	652109.36	1055758.42	RED
1043	652069.58	1055777.32	RED
1044	652013.99	1055899.35	RED
1045	652032.96	1055835.22	RED
1046	651981.53	1055940.05	RED
1047	650081.41	1055406.31	RED
1048	650122.82	1055329.85	RED
1049	650042.62	1055384.58	RED
1050	650093.9	1055312.87	RED
1051	651203.2	1055657.93	1051 SPUR
1052	651109.05	1055304.22	RED
1053	651255.66	1055235.67	RED
1054	651338.52	1055306.85	RED
1055	651388.78	1055384.35	RED
1056	651415.19	1055424.78	RED
1057	651186.63	1055455.03	RED
1058	651113.8	1055509.76	RED
1059	651182.28	1055579.08	RED
1060	651390.2	1055738.61	RED
1061	651414.54	1055607.06	RED
1062	651383.67	1055550.26	RED
1063	651261.89	1055616.16	RED
1064	651335.52	1055708.65	RED
1065	651829.2	1056105.58	SPUR
1067	652342.79	1055473.44	SPUR
1068	652398.01	1055522.07	RED

Point Number	Easting	Northing	Description
1108	651942.08	1058633.83	GREEN
1109	651863.11	1058648.33	GREEN
1110	651837.62	1058758.19	GREEN
1111	651712.61	1058827.35	GREEN
1112	651692.64	1058850.23	GREEN
1113	651725.55	1058879.44	GREEN
1114	651742.69	1058854.41	GREEN
1115	651738.42	1058813.97	SPUR
1116	651548.52	1058660.14	SPUR
1117	651497.66	1058552.19	GREEN
1118	651517.92	1058576.43	GREEN
1119	651489.91	1058582.44	GREEN
1120	651141.86	1059206.98	SPUR
1121	651097.23	1059294.29	GREEN
1122	651121.64	1059305.19	GREEN
1123	651136.41	1059285.55	GREEN
1124	651109.55	1059273.63	GREEN
1125	650945.29	1059406.24	CL GATE
1126	650641.55	1059386.82	SPUR
1127	650657.13	1059357.35	GREEN
1128	650672.19	1059223.22	GREEN
1129	650573.16	1059214.84	GREEN
1130	650488.16	1059262.72	GREEN
1131	650493.81	1059338.07	GREEN
1132	649778.86	1058531.63	RED
1133	649550.06	1058493.44	RED
1134	649499.3	1058475.95	RED
1135	649306.76	1058400.32	RED
1136	649270.21	1058387.01	RED
1137	649324.81	1058344.31	RED
1138	649340.47	1058360.09	RED
1139	649706.84	1057402.34	SPUR
1140	649536.04	1057281.35	YELLOW
1141	649637.96	1057193.43	YELLOW
1142	649672.5	1057167.15	YELLOW
1143	649680.96	1057212.71	YELLOW

Point Number	Easting	Northing	Description
1183	647767.72	1053945.65	YELLOW
1184	647886.74	1053932.91	YELLOW
2000	648085.2	1053121.58	SPUR
2001	648082.27	1053235.94	SHOT
2002	648098.67	1053137.2	SHOT
2003	648303.38	1053141.8	SPUR
2004	648276.5	1053156.4	SHOT
2005	648352.16	1053253.74	SHOT
2006	648838.22	1054026.08	SPUR
2007	648889.94	1053015.76	SPUR
2008	648857.89	1052983.77	SHOT
2009	648786.02	1052992.18	SHOT
2010	648781.32	1053140.5	SHOT
2011	648849.8	1053138.74	SHOT
2012	650340.98	1054113.94	SHOT
2013	651336.84	1055509.51	shot
2014	651862.29	1055614.9	shot
2015	651881.86	1055546.01	shot
2016	651774.89	1055519.12	shot
2017	651759.45	1055600.52	shot
2018	650474.42	1055437.44	SHOT
2019	650590.4	1055489.02	SHOT
2020	650982.99	1055701.12	SHOT
2021	650874.45	1055789.9	SHOT
2022	650423.88	1055571.21	SHOT
2023	650533.73	1055628.44	SHOT
2024	652444.48	1056505.97	shot
2025	652156.34	1057040.52	shot
2026	651083.94	1057596.21	shot
2027	649997.14	1058017.48	shot
2028	649059.51	1056952.42	shot
2033	646834.3	1055044.09	SPUR
2034	646643.96	1055301.45	spur
2035	646637.49	1055254.2	shot
2036	646615.29	1055298.75	shot
2037	646532.41	1055232.01	shot

Appendix C:

Erosion and Sediment Control plan
(Separate Document)

Note: The Erosion and Sediment Control Plan is under development and pending approval by the MDE. Upon approval, it will become part of this SOW.